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ABSTRACT

A LONG RANGE DEVELOPMENT PLAN, CONCEIVED AS A GENERAL GUIDE TO FINAL OBJECTIVES, USES MANY DIAGRAMS AND MAPS TO ILLUSTRATE THE TEXT. THE PLAN IS PREDICATED ON THE ASSUMPTION THAT ORDERLY AND EFFICIENT DEVELOPMENT OF SITE POSSIBILITIES IS SUBJECT TO EVER-CHANGING INFLUENCES. THE FOLLOWING AREAS ARE EXAMINED--(1) CAMPUS ENVIRONMENT, (2) ACADEMIC FACILITIES, (3) PROFESSIONAL PROGRAMS; (4) LIBRARY, (5) ADMINISTRATIVE, FACULTY, AND STUDENT SERVICES, (6) PHYSICAL EDUCATION FACILITIES, (7) STUDENT HOUSING, AND (8) UTILITIES. THE CITRUS RESEARCH CENTER, THE AGRICULTURAL EXPERIMENT STATION, AND OTHER SPECIALIZED CENTERS ARE ALSO INCLUDED. (FPO)

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LONG RANGE DEVELOPMENT PLAN

UNIVERSITY OF CALIFORNIA, RIVERSIDE

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MAY 1964

Prepared by GEORGE VERNON RUSSELL F. A. I. A. & ASSOCIATES Architects and Planners

A university campus is one of the most enduring and inspiring of all human creations — yet to meet the needs of a dynamic society it must possess both intellectual and physical flexibility concomitantly with essential stability. The physical plant serving as a vehicle for the intellectual endeavors should not become rigid but rather be plastic and exhilarating. The proposed Physical Master Plan for UCR is designed to meet these requirements.

HERMAN T. SPIETH

FOREWORD

In 1962 the President of the University initiated a program which called for the review, updating and publication of physical plans for all campuses of the University. The document presented herewith is the result of a cooperative undertaking by department chairmen, faculty members, UCR campus and Statewide administrators, the Campus Planning Committee, the Chancellor's *ad hoc* committee on Long Range Development Plan, consultants retained for various special facets of development program, the Consulting Landscape Architect and the Consulting Architect. It was approved by the Regents in May 1964.

In 1960 appreciation was conveyed to the City and the County of Riverside for their cooperation in formulating the 1960 University Community Master Plan for an orderly development of the surrounding community and the University is pleased to note their continuing concern for the future of the campus.

The purpose of a Long Range Development Plan is to examine the possibilities of a site and subsequently prescribe an orderly and economical means of developing it to a point of full and efficient use, but everchanging influences, detailed requirements and new techniques preclude rigid adherence to any such Plan; rather the Plan should serve as a general guide to final objectives and can only be of lasting value if periodic reviews and adjustments are made to compensate for unforeseen influences. This document reflects these considerations.

The 1960 Plan mentioned that a rather sizeable building program had materialized but that the scale and configuration of previously designed structures would be at variance with later developments based on entirely different enrollment objectives. Such has indeed been the case but it is felt that these influences will be materially lessened by the advent of the several major buildings currently scheduled for early completion in and near the campus center.

Increased familiarity with the characteristics and purposes of existing facilities, landscape patterns, and the topography of the site have been influential in shaping the minor changes that are apparent in the new Plan which by comparison to some campuses might seem to lack form. This, however, is partly due to the previous development of the Citrus Experiment Station facilities and the scattered earlier buildings of the College of Letters and Science. In the current plan building and landscape arrangements that might generate excessive monumentality have been deliberately avoided — this in the belief that intimate courts, connecting passages, gates and a variety of landscape features might create an environment where intellectual interchange and human relationships might be more easily propagated.

Then, too, it has been found that an addition to form "following function" it even more surely follows the Major Capital Improvement Program and appropriations: this calls for *incremental development* which in turn means that the "best laid plans" often undergo strange and unpredictable metamorphoses under the influences of budget and need. Some of the informality of the UCR Long Range Development Plan results from a feeling that the building shapes and outdoor spaces indicated lend themselves to incremental expansion with more grace than do those with rigid configuration.

The several major buildings scheduled for completion in 1965, along with their landscaped areas and future connecting arcades, should firmly establish the character of the academic center. It is sincerely hoped that this will measure up to the potential of the site and to the objectives of the University.

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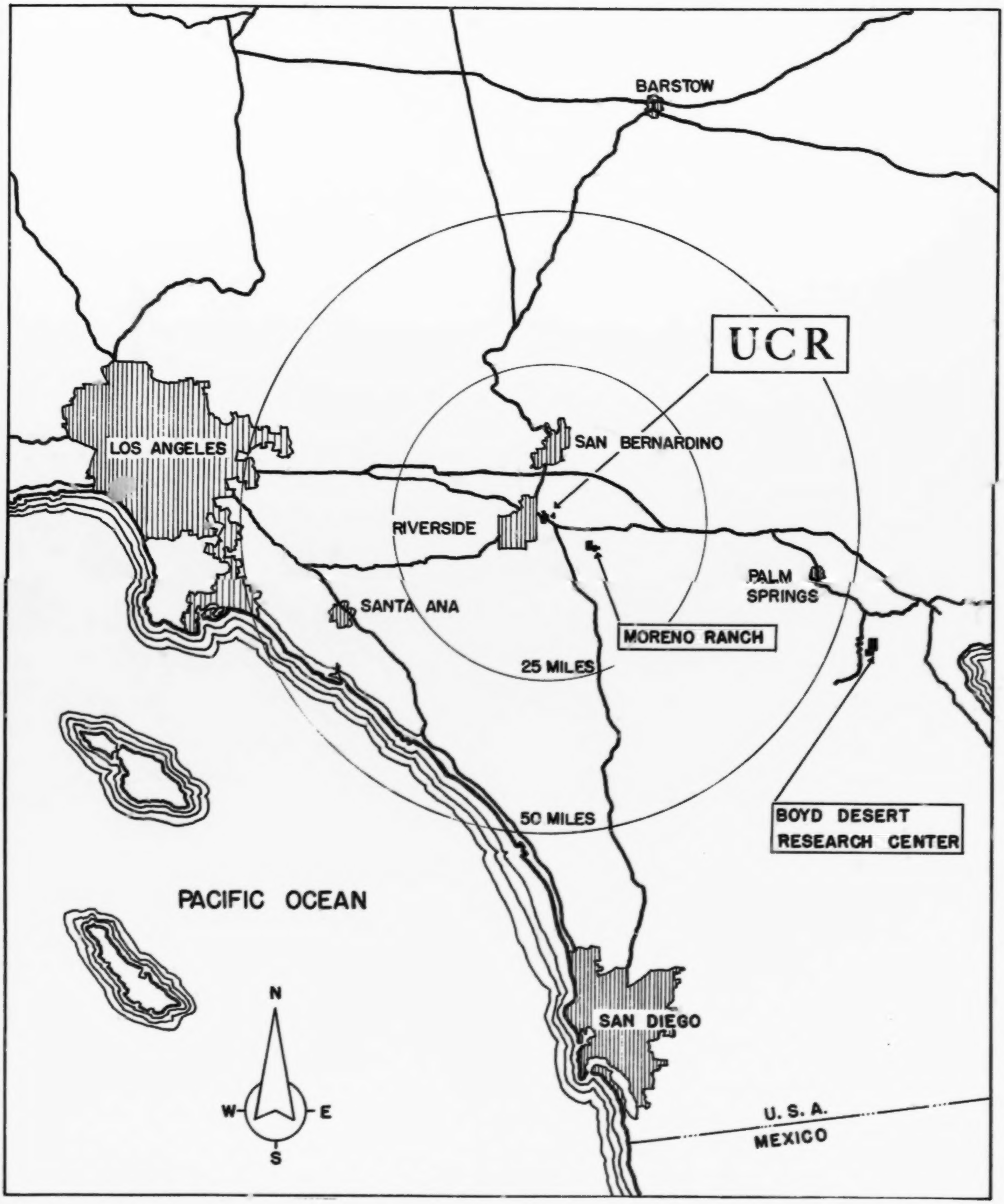
BARSTOW
UCR
SAN BERNARDINO
LOS ANGELES
RIVERSIDE
PALM SPRINGS
SANTA ANA
MORENO RANCH
25 MILES
BOYD DESERT RESEARCH CENTER
50 MILES
PACIFIC OCEAN
N
W
E
S
SAN DIEGO
U. S. A.
MEXICO

DRAWING NO. 1 VICINITY MAP

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GEORGE VERNON RUSSELL F.A.I.A. & ASSOCIATES

HISTORY

DEVELOPMENT OF THE UNIVERSITY COMMUNITY

The 1960 UCR Master Plan assignment included active participation by the Consulting Architect in affairs pertinent to the development of areas bordering the campus. Excerpts from his observations made at that time follow:

"In the case of the Riverside Campus the campus planner is not confronted with the problem of starting from completely undeveloped land and the generation of an entirely new community; perhaps an even more difficult task lies ahead due to the fact that facilities for a comparatively miniature institution are already in existence and that the campus is contiguous to an established city (Pop. 85,000)* which, until recently, has been a center of the Southern California citrus growing industry.

"In the region's hasty and typically disorderly growth, the patterns of campus and town have already collided and reconciliation of diverse objectives has often called for skill in diplomacy as well as in planning. It is too early to assess the results of our efforts as well as those of the many others who are genuinely interested in a gracious transition between town and gown, but early indications point to considerable success even though opposition is expected.

"Present and eventual land-use will have an important and lasting effect on the development of the University and these have been the subject of close study and analysis since our introduction to the project. Less obvious but equally significant are many factors of influence such as regional population growth patterns, economics, recreation, cultural heritage, resources and climate — all of which help to define the general character of the campus and its surrounding community. Our assignment is of recent origin but we have been immediately impressed with the crucial importance of one of the initial criteria — the inevitably close relationship between city and campus — and with this in mind we have maintained close contact with planning agencies involved in establishing the ultimate character of the related community."

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* 1964 Population 125,000 (estimated)

In May 1960 a Master Plan of the University Community, prepared by the city of Riverside Planning Department in close collaboration with the University, was approved by The Regents. Subsequent approval by the residents within the area resulted in the annexation of the campus and 6,400 acres of surrounding territory. The Campus Planning Committee and its consultants assisted the Planning Department of the City of Riverside during the preparation of the Master Plan — University Community and their suggestions were included in the city's Plan.

So far no significant variations to the Community Plan have been requested or granted. This may be due in part to the slow development of properties zoned for commercial use, though it may be hoped that the land use pattern set in the Plan is found equitable and realistic. Land Use patterns prescribed for the Master Plan — University Community are indicated on Drawing #2.

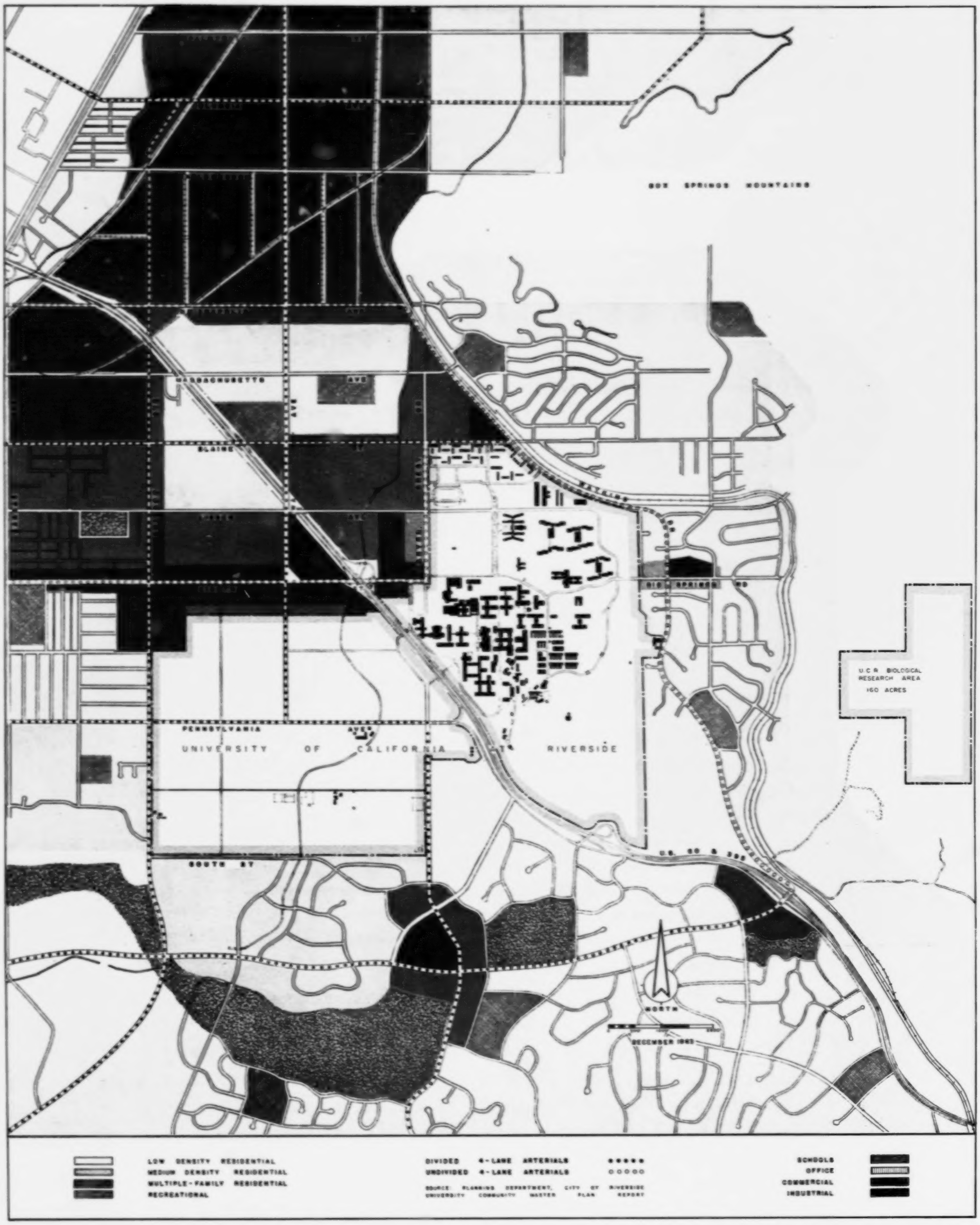
Off-campus housing and service requirements of the University, development programs of land owners in the area, traffic patterns, proposed community services such as schools, recreational facilities, fire and police protection and utilities are discussed in the Master Plan — University Community and further consideration in this report might be redundant. However, the need for these many facets of the University-oriented community has been carefully considered.

The preparation of a plan for a community surrounding a University does not assure development in accordance with the plan; only firm controls will make this possible. Control often assumes an ugly character but so does uncontrolled development.

DEVELOPMENT OF THE RIVERSIDE CAMPUS TO DATE

The University of California, Riverside, is the fourth oldest campus of the University. Located three miles east of downtown Riverside, it consists of the following operational units:

1. The Citrus Research Center and Agricultural Experiment Station, formerly known as the Citrus Experiment Station, and referred to in this document as CRC-AES.
2. The College of Letters and Science.
3. The College of Agriculture.
4. The Graduate Division.
5. The Air Pollution Research Center.


BOX SPRINGS MOUNTAINS
MASSACHUSETTS AVE
BLAINE
BIG SPRINGS RD
U.C.R. BIOLOGICAL RESEARCH AREA 160 ACRES
PENNSYLVANIA AVE
UNIVERSITY OF CALIFORNIA AT RIVERSIDE
SOUTH ST
US 60 & 395
NORTH
DECEMBER 1963
LOW DENSITY RESIDENTIAL
MEDIUM DENSITY RESIDENTIAL
MULTIPLE-FAMILY RESIDENTIAL
RECREATIONAL
DIVIDED 4-LANE ARTERIALS
UNDIVIDED 4-LANE ARTERIALS
SOURCE: PLANNING DEPARTMENT, CITY OF RIVERSIDE UNIVERSITY COMMUNITY MASTER PLAN REPORT
SCHOOLS
OFFICE
COMMERCIAL
INDUSTRIAL

DRAWING NO. 2 CAMPUS & FUTURE LAND USE

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6. The Philip L. Boyd Desert Research Center — located off campus but administered therefrom.
7. The Dry Lands Research Institute.

plus two additional units located on the campus but operating under statewide policies:

A. The Regional Headquarters of the Agricultural Extension Service, and,
B. A branch of the University Extension division.

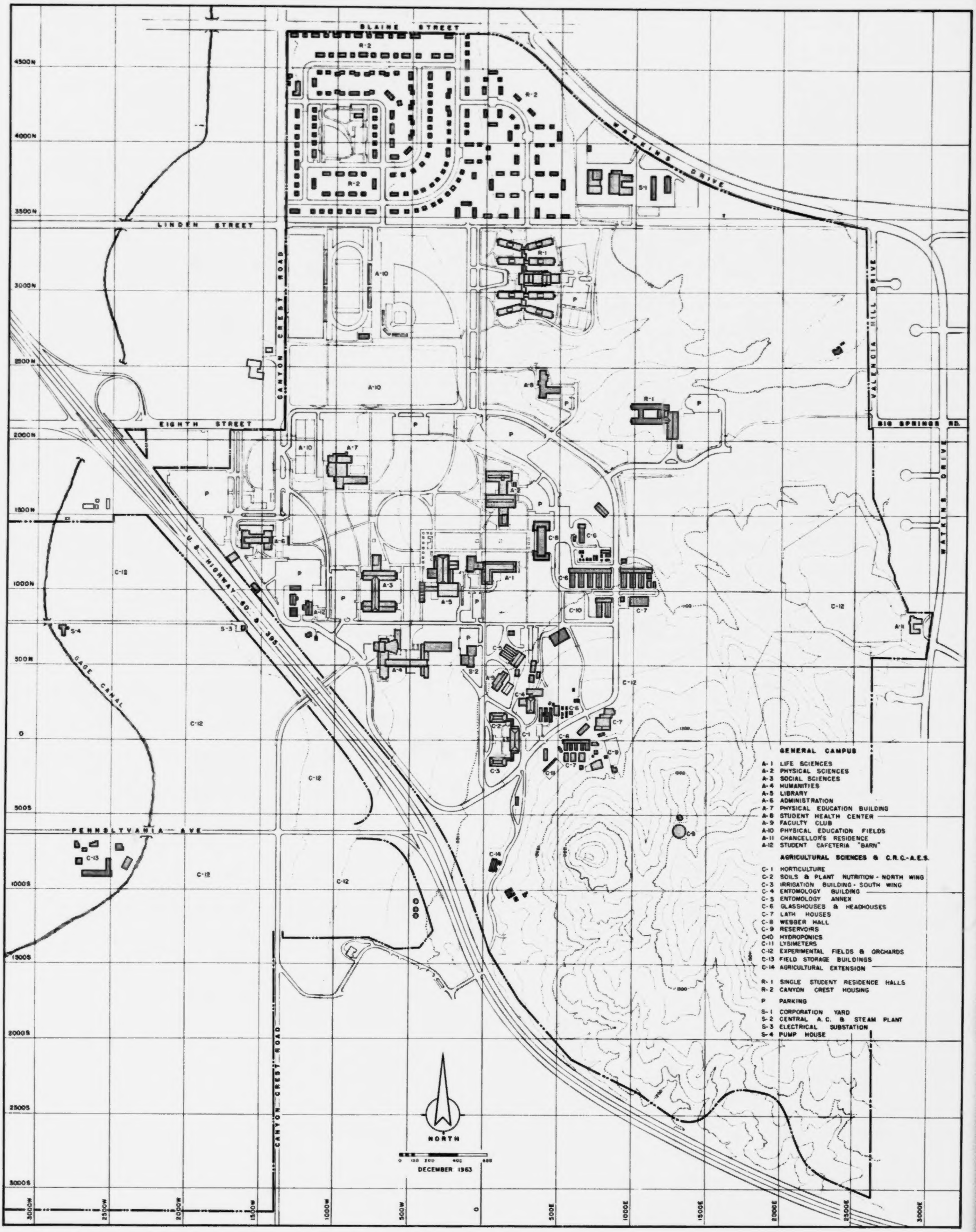
Following the recommendations to President Sproul in the report of September 1948 of a Statewide Committee on University Expansion at Riverside and Davis, Dr. Gordon S. Watkins was appointed Provost of the Riverside Campus. Immediate development was interrupted by the Korean War but in April 1951, a College of Letters and Science was approved by the Academic Senate of the University and ground was broken on land immediately north of the Citrus Experiment Station which had been moved to its present site in 1917. Beginning enrollment was planned for 1,000 students with an ultimate enrollment objective set at 1,500 students. The combined sites totalled approximately 1,000 acres. Five initial buildings were completed early in 1954 and classes began February 15, 1954.

Shortly after the opening of the new College of Letters and Science horizon enrollment objectives were revised and a Campus Development Plan which would provide for 5,000 students was adopted by The Regents in September 1955.

In 1956 Dr. Herman T. Spieth was appointed Provost (later redesignated Chancellor) of the Riverside campus upon the retirement of Dr. Watkins. In July 1959 the Consulting Architects were instructed to proceed with a new Campus Master Plan which would eventually provide facilities for an enrollment of 10,000 students, a greatly enlarged faculty, and, of course, a correspondingly increased non-academic staff.

In addition to the expansion of existing programs, the new campus was eventually to provide facilities for graduate studies and professional schools and was to fulfill the objectives of a General Campus of the University (as published in 1955 and approved by The Regents in 1957) defined as follows:

(a) *Research* directed toward advancing the understanding of the natural world and the interpretation of human history and of the great creations of human insight and imagination;
(b) *Instruction* of able young people, not merely by transmitting to them established knowledge and skills, but by helping them to experience with their teachers the actual processes of developing and testing new hypotheses and fresh interpretations in many fields;
(c) Training for professional careers — a training not merely routine, but grounded in understanding of relevant sciences and literature, and enlightened by some


BLAINE STREET
LINDEN STREET
EIGHTH STREET
CANYON CREST ROAD
WATKINS DRIVE
VALENCIA HILL DRIVE
BIG SPRINGS RD.
U.S. HIGHWAY 60 & 395
GAGE CANAL
PENNSYLVANIA AVE
NORTH
0 100 200 400 600
DECEMBER 1963
GENERAL CAMPUS
A-1 LIFE SCIENCES
A-2 PHYSICAL SCIENCES
A-3 SOCIAL SCIENCES
A-4 HUMANITIES
A-5 LIBRARY
A-6 ADMINISTRATION
A-7 PHYSICAL EDUCATION BUILDING
A-8 STUDENT HEALTH CENTER
A-9 FACULTY CLUB
A-10 PHYSICAL EDUCATION FIELDS
A-11 CHANCELLOR'S RESIDENCE
A-12 STUDENT CAFETERIA "BARN"
AGRICULTURAL SCIENCES & C.R.C.-A.E.S.
C-1 HORTICULTURE
C-2 SOILS & PLANT NUTRITION - NORTH WING
C-3 IRRIGATION BUILDING - SOUTH WING
C-4 ENTOMOLOGY BUILDING
C-5 ENTOMOLOGY ANNEX
C-6 GLASSHOUSES & HEADHOUSES
C-7 LATH HOUSES
C-8 WEBBER HALL
C-9 RESERVOIRS
C-10 HYDROPONICS
C-11 LYSIMETERS
C-12 EXPERIMENTAL FIELDS & ORCHARDS
C-13 FIELD STORAGE BUILDINGS
C-14 AGRICULTURAL EXTENSION
R-1 SINGLE STUDENT RESIDENCE HALLS
R-2 CANYON CREST HOUSING
P PARKING
S-1 CORPORATION YARD
S-2 CENTRAL A.C. & STEAM PLANT
S-3 ELECTRICAL SUBSTATION
S-4 PUMP HOUSE
4500N
4000N
3500N
3000N
2500N
2000N
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DRAWING NO. 3 EXISTING CAMPUS PLAN

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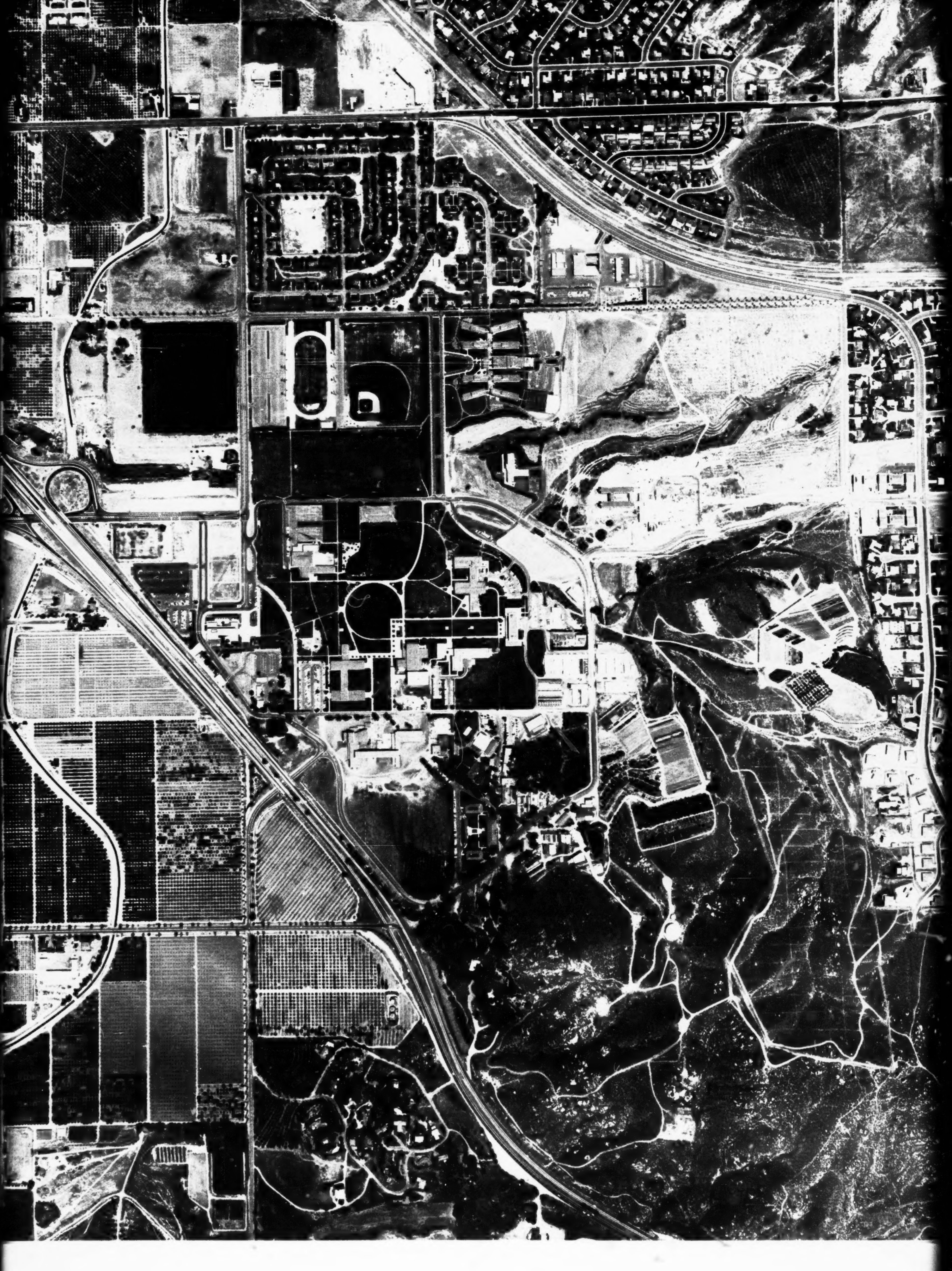
GEORGE VERNON RUSSELL F.A.I.A. & ASSOCIATES

experience of the methods by which boundaries of knowledge are pushed back; and,

(d) Various sorts of expert public service.

With these objectives in mind the Chancellor's Committees for Master Planning, the Statewide Office of the Vice-President—Business, and the UCR Planning Analyst have supplied data relating to the amount and general configurations of space needed and the recommended priority of various facets of this program.

In some cases forecasts have been limited to those concerned with anticipated full time enrollment in 1970. However, this revision of the Long Range Development Plan is based on extrapolations of these shorter term forecasts and the recommendations of the Office of the Vice-President—Business, and the UCR Planning Analyst. Their carefully considered recommendations have been supported by long experience gained during the earlier growth of other campuses of the University. Even with the very considerable amount of forecast material and information on existing physical plant available, the inevitability of change lends validity to the policy of periodic updating of the UCR Plan.



CAMPUS ENVIRONMENT

GENERAL DESIGN OBJECTIVES

In the 1960 Master Plan, design objectives were discussed in general and during the interim period some implementation of these has taken place. Buildings now in the process of design development or construction should contribute greatly to the establishment of an architecturally integrated campus core. The Auditorium, additions to the first increment of the Student Center, and extension of Administration facilities, along with much-needed connecting arcades, will still be missing in the basic composition but a more cohesive complex should become evident by 1966.

It is felt that the design philosophy expressed in the 1960 plan by the Consulting Architect is still valid and it is restated as a part of this report as follows:

"Transplantation of the new student from home or from foreign lands to University environment often creates a violent upheaval in his life's pattern. Adaptation to new surroundings comes easily to some — others, perhaps more sensitive and possibly more intellectually promising, are dismayed by the abrupt change and many of the latter fail in the readjustment process.

"With this in mind, as well as for other more practical reasons, we have suggested a campus plan which by many standards is compact — our feeling being that a meaningful relationship between buildings and open spaces is even more important than the success of individual structures.

"The view and scale of the arid and rocky background hills are always present — the contrast and delight of shade, shadow, and space where the individual counts are less apparent — and so, with limitless surrounding vistas we feel that endless, formal and forbidding man-made malls are not even for the birds.

"Present campus configuration seems to cry for the closing of building ranks and, above all, the creation of *usable* outdoor spaces.

"It has been said that the large university (and UCR will be a large university) is appropriate today because it can house the multiple facets of knowledge and research; however, it must not dwarf the individual and his group interest. We feel that placement, scale, colors, textures and building forms will do much to reduce the incidence of maladjustment.

"In contrast to the intimate areas, larger courts should be created where diverse groups might share experiences on a greater scale. But even in the larger spaces we hope for definition and, in seeking this, we have suggested deliberate interruption of the existing long cemetery-like malls by means of converging arcades, buildings and landscape features. The widely divided existing walks should give way to paved courts which would force a mingling of students and faculty — market places for discussion and learning, so to speak.

"The compact Academic Center reduces the distance between classrooms — so important during the oppressive heat which often prevails. Furthermore, the magnitude of strongly suggested connecting arcades is reduced and the possibility of their becoming a reality is increased.

"The practical problems of maintenance and plant operation have also been strong factors in establishing the suggested configuration of the campus. Regional aridity and excessive heat call for constant care and the irrigation of most landscaped areas. The cost of distribution of utilities and irrigation systems will also be affected by the extent of site development."

BUILDINGS

The several initial structures executed by previous architects were built of buff-colored brick. In the expansion of the campus acknowledgement will be made in various ways of the architectural precedent already set, but, as in other arts, variety must be introduced and new methods, materials, textures, and forms are experiences which should be imparted to the student. The campus development will span many years and many changes of design philosophy. To deny the expression of the latter by perpetuation of current or past styles would be a certain sign of cultural stagnation and a certain path to monumental monotony.

Many colleges have nurtured the belief that architectural harmony results from the adaptation of a "style" and that conformity suggests neighborliness. Some justification for this opinion might exist in the case of ensembles of structures such as high schools which often are subject to the process of demolition within thirty years. The life expectancy of a University campus is a different matter. Over the centuries, the expansion of the campus should manifest some of man's cultural growth, changes, or even ambiguities; otherwise, it might rightly be compared to the sterile and unreal reality of a wax museum.

To prescribe the exact configuration of future buildings is not the intent of the Long Range Development Plan and so it is hoped that it will not prove to be stultifying to the designers who will follow; rather, it must set broad outlines only and by so doing help to establish a "spirit" that many call "Southern Californian."

The semi-desert environment is a natural problem, and forms of buildings and landscaping should be designed to provide relief from solar radiation. The use of covered passages, sun shelters and controls, wide cornice projections and like devices are as valid today as they were during the early Spanish occupation. Dryness suggests the use wherever possible of pools, jets and fountains, the psychological effects of which are invaluable. In contrast to the current wide-spread use of so-called "International Style" — an architecture with northern European roots — respect must be shown our local climatic phenomena as well as our regional heritage — recent as the latter might be by Old World standards — and the stark and unprotected glass facade must be eschewed.

Many buildings in the Plan have been indicated as interconnected rectilinear shapes which resemble a series of domino arrangements. Most of these would house classrooms, offices and laboratories. Tenuously attached lecture rooms and other ancillary features take more exotic forms to provide relief from the prosaic shapes of classroom and laboratory buildings.

Further variety can be achieved in the several special purpose buildings proposed as elements of the Long Range Development Plan, e.g., the Student Center, Library and Auditorium. These present exciting opportunities for design latitude in their forms, textures and fenestration patterns.

Height changes also offer opportunities for the introduction of design variations and delight but high-rise buildings should be avoided insofar as is possible. Traffic loads imposed by mass circulation at class changes complicate vertical transportation. Residence Halls and the Library are among the exceptions to this general principle, for peak loads would be comparatively nominal in these buildings. If higher structures are necessary, they should be located on the periphery of the central campus in order to avoid dwarfing the scale of existing smaller buildings. Classrooms and laboratories needing wall space but little or no fenestration might be more conveniently located in basement areas rather than in upper stories. This scheme has been followed in the new Humanities complex, where the language laboratories are so located.

The designer of future additions to the original existing structures is confronted with the problem of transition from a scale generally found in buildings of a small college to one befitting a large university. Entries, traffic patterns, service facilities and the architectural and engineering features of existing buildings must be changed in subsequent alteration and addition programs.

Further discussion of the configuration of separate future structures on the campus seems pointless at this time. Their actual shapes and purposes may be beyond the dreams of our most advanced designers. But there must be an adherence to *order* and *form correlation* in the work to come. These are the ingredients from which great and beautiful cities *and* campuses will be made.

The late Eliel Saarinen remarked, "In general, people have little notion of form correlation between buildings in the town . . . that town which has many beautiful buildings they regard as a marvel of beauty. But only a few seem to realize that if a *town* is really a marvel of beauty, it is so because of a proper correlation of its buildings." We add — and its correlation of buildings to environment . . . the campus is a city in microcosm. General Design and Planning objectives have not been altered since 1960 and it is hoped that the new buildings now in various states of development will reflect concern for the *ensemble* of buildings to an even greater degree than that relating to individual structures. To this end there have been frequent joint conferences comprised of all architects involved in the various projects now under way with the hope that such a policy will contribute to the creation of attractive buildings and *attractively related* buildings.

LANDSCAPE

SETTING AND ENVIRONMENT

UCR is endowed with a unique and beautiful location for the development of its campus. Set at the base of the Box Springs Mountains, its land gently slopes up from Citrus groves until it blends with the rugged background of rocky foothills. To the southeast and north the towering Eucalyptus and other trees on the older Citrus Experiment Station area and a long double row of Mexican fan palms form a rich green background against the hills. Beyond, the campus is traversed by canyons, barrancas, and draws with an infinite variety of character, and a wealth of possibilities.

It would be most unrealistic not to be consciously aware of this setting in any landscape or site development.

CLIMATE

Riverside has a Mediterranean environment, subject to the heat of summer sun and to winter temperatures which occasionally drop below freezing. Plant materials selected for the campus must be such that they will thrive under these conditions. The higher areas of the campus are relatively frost free, but the protective mountains which hold the heat in winter do the same in summer, making trees and other shade essential.

A cooling westerly breeze normally springs up in the afternoon, but the destructive forces of the "Santana" winds sweep through the passes and over the mountains from the desert at times during the fall and winter months, leaving havoc in their wake if trees are not previously tied or pruned.

SOIL

The soil, at best, is of low fertility and humus content, and is of decomposed granite composition. Much of the central campus is underlaid with a clay hardpan, a few inches to a foot below the surface, and sometimes as much as ten or twelve feet thick. Drainage is poor in these areas which increases the build up of salts and abets rapid run off. This condition also encourages surface rooting which can be disastrous for trees in strong winds. The general slope of the campus toward the west and the hotest rays of the sun also increase run off and heat retention of the soil. The upper portions of the campus are rocky and the best soil is found in the bottom of canyons, portions of the old campus, and in some of the yet undisturbed areas.

The continual addition of humus and soil conditioners is necessary to improve the fertility and texture of the soil in addition to aiding in water penetration which will encourage deeper rooting. Improving the drainage mechanically through aeration and drainage wells, chemically and by other means, is necessary for the healthy growth of plants, and mulches will help to prevent evaporation.

FREEWAY

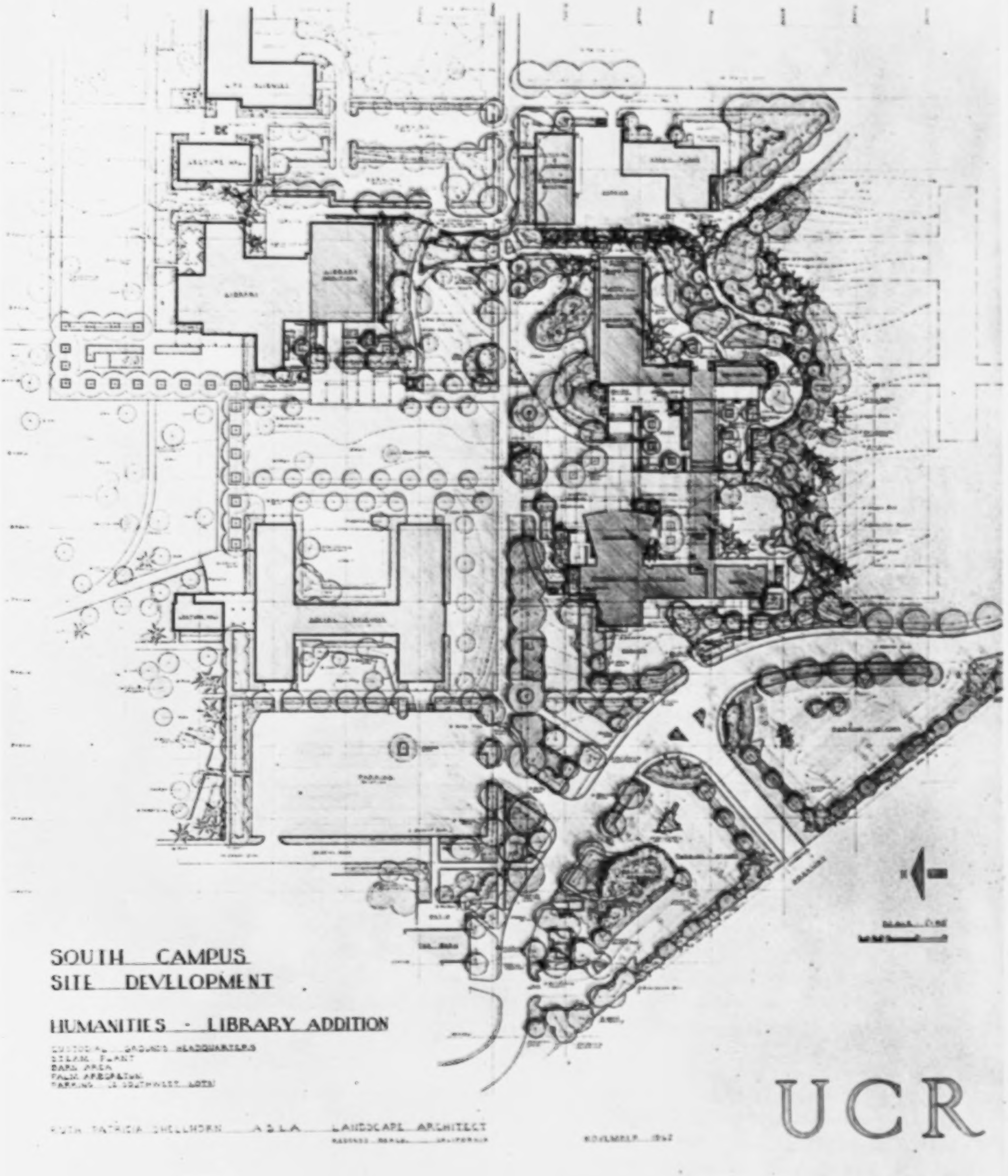
Although the Freeway makes UCR easily accessible, it also brings noise and fumes. It therefore becomes increasingly important to plant screening materials to serve as a buffer between campus and Freeway.

BASIC CONCEPT

The dominance of the background hills and mountains must be recognized and their influence felt on the campus. Natural rock outcroppings can be featured effectively and rock used in walls, paving, or in combination with plants will help to emphasize this tie to the background environment. The color of the hills can be brought into the campus and the contrasting cool, rich greens will become more effective against it. Lawn areas become particularly inviting, and tall trees with long shadows create welcome shade.

"Rivers of green" should flow between the buildings and courtyards, knitting them together, framing vistas, and forming a variety of spaces ranging from large open lawns to intimate gardens. Open areas or vistas framed by trees among the buildings will create a sense of distance in contrast with confined spaces.

Terraces placed where needed for cross circulation will also serve as sitting areas with benches and shade where one may view the lower campus. Such a terrace is desirable at Webber Hall. Increasing the size of the existing paving, and elevating it above the Mall, placing trees and planting within and at the base of it will frame and enhance the


SOUTH CAMPUS
SITE DEVELOPMENT
HUMANITIES - LIBRARY ADDITION
CUSTODIAL GROUNDS HEADQUARTERS
STEAM PLANT
BARN AREA
PALM ARBORETUM
PARKING (2 SOUTHWEST LOTS)
RUTH PATRICIA SHELLHORN A.S.L.A. LANDSCAPE ARCHITECT
REDONDO BEACH CALIFORNIA
NOVEMBER 1962
LIBRARY
LIBRARY ADDITION
PARKING
UCR

SOUTH CAMPUS LANDSCAPE PLAN

UCR

LONG RANGE DEVELOPMENT PLAN

UNIVERSITY OF CALIFORNIA, RIVERSIDE
GEORGE VERNON RUSSELL F.A.I.A. & ASSOCIATES

building and will also provide for increased circulation between the two flanking buildings scheduled for early construction. Other such terraces are required in the Life Sciences and Physical Sciences areas.

A proper terminus at the south end of the double drive east of the athletic fields is needed. Here a paved area, backed by a wall against the planted slope, has been indicated; the introduction of trees and benches would make this an inviting place to linger on the way to or from the Residence Halls.

The campus entrance imparts to the visitor his first impression. The sweep of lawn and trees at the Entrance Mall has been planned to soften the silhouette of the Administration Building and deflect the view into the large open area east of it. The tree-planted paving at the Administration Building will become part of a larger paved area which will tend to unify the nearby buildings. A tree-shaded seating area at the south end of the Entrance Mall will accommodate pedestrian traffic from the parking lot to the west. Tree-lined roadways divided by panels of lawn and roses and adequate planting around the parking areas will integrate these elements with the surrounding landscape.

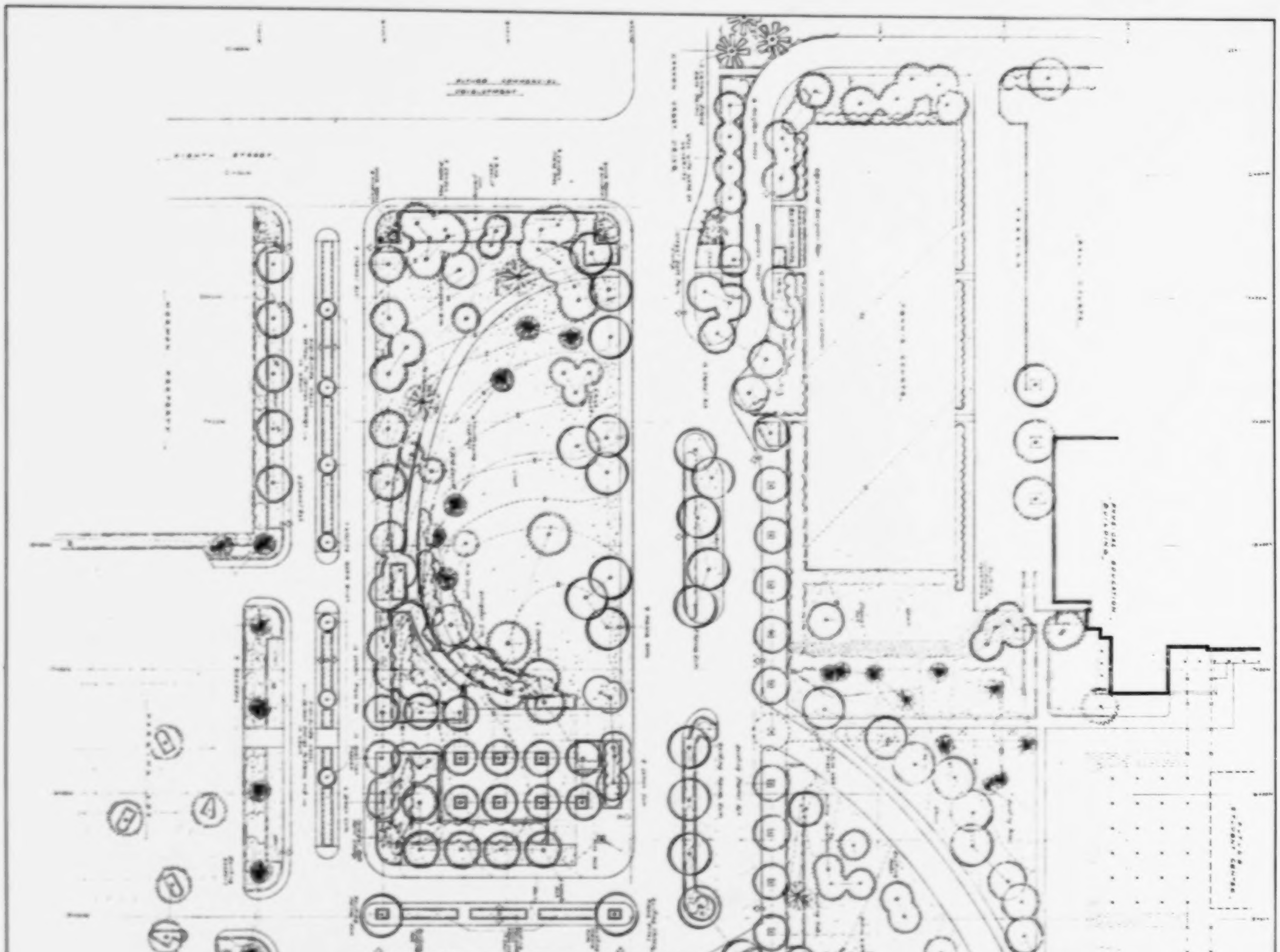
CANYONS AND HILLSIDES

The winding natural draws, especially in the Residence Halls area, will provide green belts for walks and recreation, and their topography will help to create interest around the buildings.

A shallow lake is proposed for the lower portion of the canyon near the Health Services Building. With the proper placement of trees, water and bog plants, it can become one of the most attractive and distinctive features of the campus, and should blend harmoniously with the canyons on either side. The bridge to the Health Services Building over the narrow portion has recently been built and adds beauty and interest to the area. Bridges should be used wherever possible in preference to fills and culverts, as they preserve the continuity of the canyon areas.

The canyon east of the academic area is proposed for recreation and will contain picnic grounds and quiet places for plant and nature study. As a transition from the picnic area, an Arboretum is planned and a sunny hill is reserved for desert and native plants. A group of stream-bed plants and trees on the canyon floor will continue on into the Arboretum and a Fern Canyon will wind up a narrow rocky cleft. A small Bird Sanctuary can be established in a short canyon cove where a pool and stream could easily be constructed.

Pedestrian trails into the rugged hillside areas of the campus should be developed as funds permit: one is proposed to lead from Fern Canyon to the Overlook, where a magnificent view of the campus is obtained. At some future date bridle trails could also be included and extended into the surrounding hills.


FUTURE COMMERCIAL DEVELOPMENT
EIGHTH STREET
PHYSICAL EDUCATION BUILDING
FUTURE STUDENT CENTER
NORTH

ENTRANCE MALL LANDSCAPE PLAN

UCR

LONG RANGE DEVELOPMENT PLAN
UNIVERSITY OF CALIFORNIA, RIVERSIDE
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PRESERVATION AND UTILIZATION OF EXISTING TREES

Existing large trees such as the dominant Eucalyptus of the Agricultural Campus and Residence Halls area, the palms along Linden Street and the Freeway, and many others in the canyons and on the campus should be preserved wherever possible.

A group of palms near the Freeway underpass has been preserved through the years, and a recently completed parking lot has been planned around them. It is hoped that these will form the nucleus of an Arboretum for plants of the palm family. To eliminate the feeling of an isolated group, it is planned to extend palms in each direction along the Freeway, not only to give continuity to the theme, but to make use of the Freeway palm planting to expand the width of the campus development. Recently an appreciable section of this palm planting was made possible by the generosity of Regent Philip L. Boyd.

PLANT MATERIAL

Plants used on the campus should be compatible with the soil and climate and should include only species which have proven themselves under these conditions. Trees such as the eucalyptus, sycamore, oak, palm, ash, elm, carob, pepper, pine, olive, locust, and cypress are suitable. Somewhat more exotic trees such as the coral, silk floss, Chinese flame, and ginkgo might be used as accent material.

Color and fragrance should be introduced where effective. Floribunda roses are being used successfully in the center planting of the Campus entrance road, and are part of the design of the Health Services Building planting. Seasonal color has its place in certain areas where maintenance will not be too difficult; the small color beds at the Administration Building entrance are an example. Cutting gardens planned for the Residence Halls will be useful as well as decorative. Flowering ground covers such as gazania, used in the road panels east of the Athletic Field, and flowering trees and shrubs such as the oleander and bottlebrush brighten the landscape and are very much at home on the campus.

Yuccas, dracaena, agaves, aloes and many of the succulents add a subtle desert touch to the scene when used in combination with large rocks and gravel ground cover.

The Citrus heritage should be recognized, and in cooperation with CRC-AES, several varieties, both decorative and successful, have been used. These include the sour orange hedge around the tennis courts, and the Bouquet orange trees in the center road strip east of the Athletic Field. It is planned to take advantage of their beauty to augment the plantings at the new Agricultural Extension site.

With sycamores and walnuts in the canyons, oaks and pines grouped along the hills, and eucalyptus across the campus in contrast to the many lower trees, the planting should complement the topography, color and texture of the natural environment.

ALLIED ARTS IN ARCHITECTURE

In the 1960 Master Plan the following comments were made by the Consulting Architect regarding the inclusion of art expressions as integral parts of campus buildings.

> "The growing importance given to art courses, the distinguished faculties assembled at several campuses of the University and increasing public interest in art make us wonder at the absence of art on the several existing campus buildings.
>
> "Limited budgets may be the reason for this quarantine but the inclusion of some funds for expression of art would seem to be in line with objectives of the University. Certainly the educational effects of architecture and art are to some degree commensurate with its cultural aims.
>
> "It is hoped that the present policy will be doomed to an early end and a pauper's grave."

So far there has been no lifting of the economic embargo on art even though the need for important art manifestations becomes more and more apparent as development takes place.

Interest on the part of a lively citizen's committee indicates early relief to the artistic sterility that still prevails.

CAMPUS LANDMARKS

BELL AND CLOCK TOWER

Plans call for a bell and clock tower to be located near the heart of the campus. The new structure should be a fitting accent to the several projects now being built or designed and which, within a very short time, will define the character of the central campus.

THE "BARN"

So far the "Barn", now serving as a dining facility, has escaped the inroads of new buildings and circulation patterns, but the new classroom building to the west of Social Sciences will make its survival somewhat uneasy. Opening of the new Student Center in 1965-66 will alter the present function of the "Barn." This fact, along with the projected growth of the campus, points toward its early relocation and service as a focal point in the proposed General Recreation Area east of the central campus.

CAMPUS ENTRANCE

The principal entrance to the Campus will develop at the eastern termination of Eighth Street, north of the Entrance Mall at Canyon Crest near the existing tennis courts. A decorative wall of substantial proportions is to be placed on the east side of Canyon Crest Street where Eighth Street terminates. A suitable inscription including the name of the campus should be installed on the wall to convey the impression that this point is indeed the main campus entrance.

CAMPUS PLAZA

A plaza suitable for large out-of-doors assemblages of people is to be developed in the area bordered by the Administration Building, the future auditorium, and the Student Center. The auditorium entrance should be designed so that it can be used as a focal point for gatherings appropriate for this area.

OTHER LANDMARKS

Future landscape, and recreational area developments near Residence Halls and the Health Center might establish other landmarks. A foot bridge has been recently completed in this vicinity over an area which will eventually be transformed into a small lake; this feature might very well become a favorite campus rendezvous.

TRAFFIC

In general the Long Range Development Plan traffic pattern provides for the exclusion of automobiles from the Academic Center in order to minimize conflicts between pedestrian and vehicular traffic. A perimeter road system is provided which encircles the Academic Center and feeds peripheral parking lots. On-campus traffic is restricted to the perimeter road system and several service roads are provided to serve facilities such as the cafeteria, auditorium, library, gymnasium, and major academic buildings. These internal thoroughfares should be barricaded at strategic points or otherwise controlled to prevent unauthorized use. Use of the existing road on the south side of the athletic fields should also be highly restricted.

The perimeter road begins at the main entrance loop at Eight Street and Canyon Crest and parallels the freeway southward. In then loops around the south and east sides of the Academic Center, through the CRC-AES area, and finally joins with the existing North-South divided road on the west side of the residence hall area. Linden Avenue and Canyon Crest become integral parts of the perimeter road system at the boundaries of the campus. A second and longer outer loop road provides several connections to the inner loop. The outer road will serve residence halls, greenhouses, botanical gardens, and the future auxiliary institutions. Non-university traffic on this road should be prevented or discouraged.

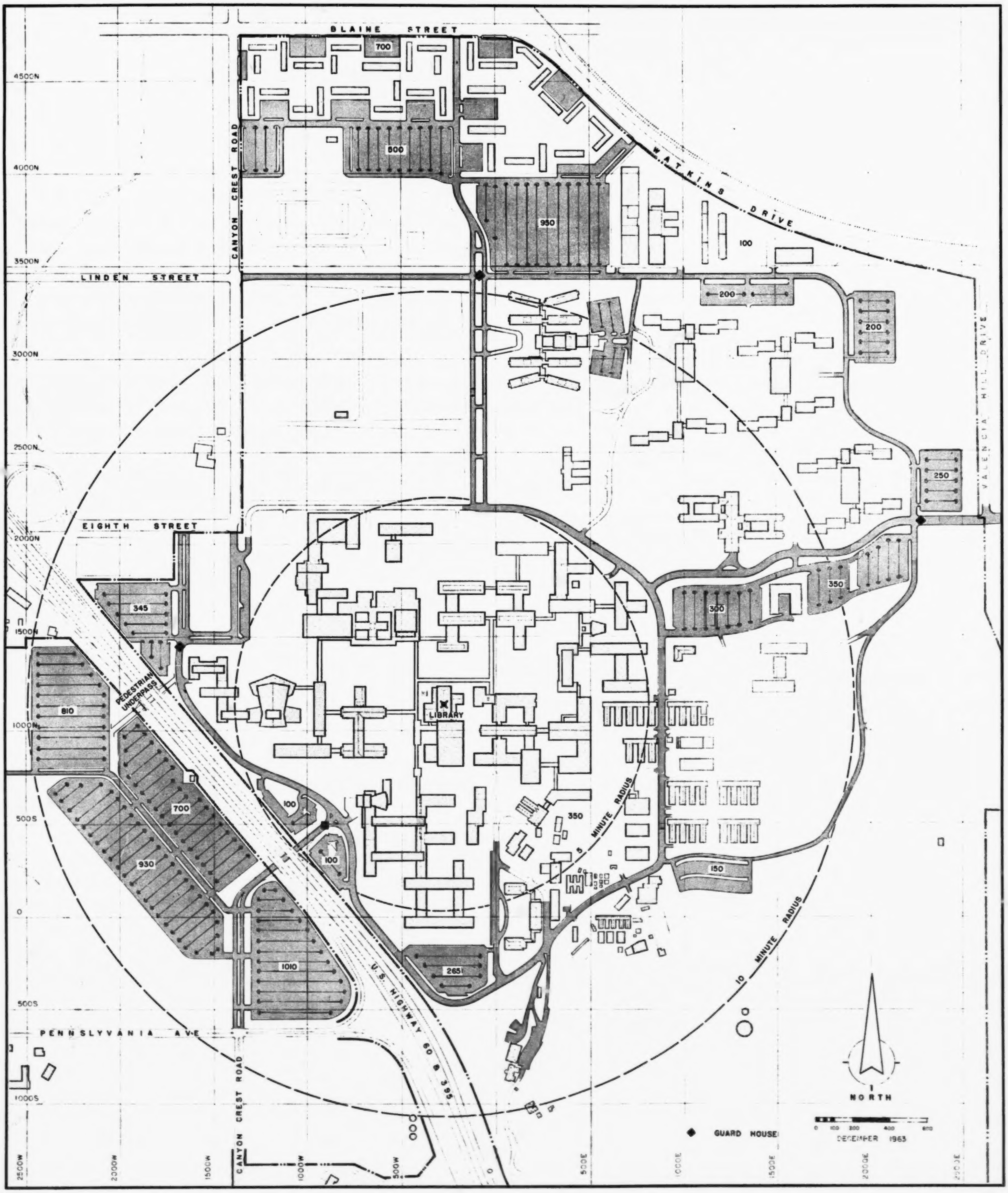
Points of traffic origin and land availability have been factors in locating major parking areas and consequently the resulting vehicular traffic on the campus perimeter road system should be minimal. The bulk of commuter parking is located west of the Freeway and is directly accessible from external roads. Access to the perimeter road system is provided at six locations determined by traffic origin studies. Unless sufficient access points are provided at these proper locations, traffic would back up on the perimeter road system at rush hours.

The University Community Study prepared by the City proposes that several of the streets in the community should be major arterial highways. These are indicated on the Proposed Land Use Plan (Drawing 2) which suggests that traffic will converge from arterials to the west, northwest, and north as well as from the new Freeway. Adequate access points to parking areas and to the internal perimeter road system provide for traffic carried by these arterials.

Construction of an off-ramp from the south-bound lane of the Freeway which would lead directly to Pennsylvania Avenue has been planned. This egress will accommodate the heavy traffic anticipated at the Pennsylvania Avenue entrance to the campus and that destined to enter major parking areas.

The main entrance to the University has been planned to serve as a major access point to the perimeter road system and to provide visitors' parking outside the internal road system. Accommodations for a public transportation bus terminal have also been provided. These in no way interfere with other vehicular traffic in the area.

The perimeter road systems indicated on the 1960 Plan have undergone minor adjustments due to topographical and landscape information made available since that time but Residence Hall service roads have been materially changed due to the reassessment of probable developments in that area.


BLAINE STREET
700
500
950
100
WATKINS DRIVE
CANYON CREST ROAD
LINDEN STREET
200
200
VALENCIA HILL DRIVE
250
EIGHTH STREET
345
300
350
PEDESTRIAN UNDERPASS
810
LIBRARY
700
100
100
930
350
5 MINUTE RADIUS
150
1010
2651
10 MINUTE RADIUS
U.S. HIGHWAY 60 & 395
PENNSLYVANIA AVE
CANYON CREST ROAD
NORTH
GUARD HOUSE
0 100 200 400 600
DECEMBER 1963
4500N
4000N
3500N
3000N
2500N
2000N
1500N
1000N
500N
0
500S
1000S
2500W
2000W
1500W
1000W
500W
0
500E
1000E
1500E
2000E
2500E

DRAWING NO. 4

PARKING AND PERIMETER ROADS

UCR

LONG RANGE DEVELOPMENT PLAN
UNIVERSITY OF CALIFORNIA, RIVERSIDE
GEORGE VERNON RUSSELL F.A.I.A. & ASSOCIATES

PARKING

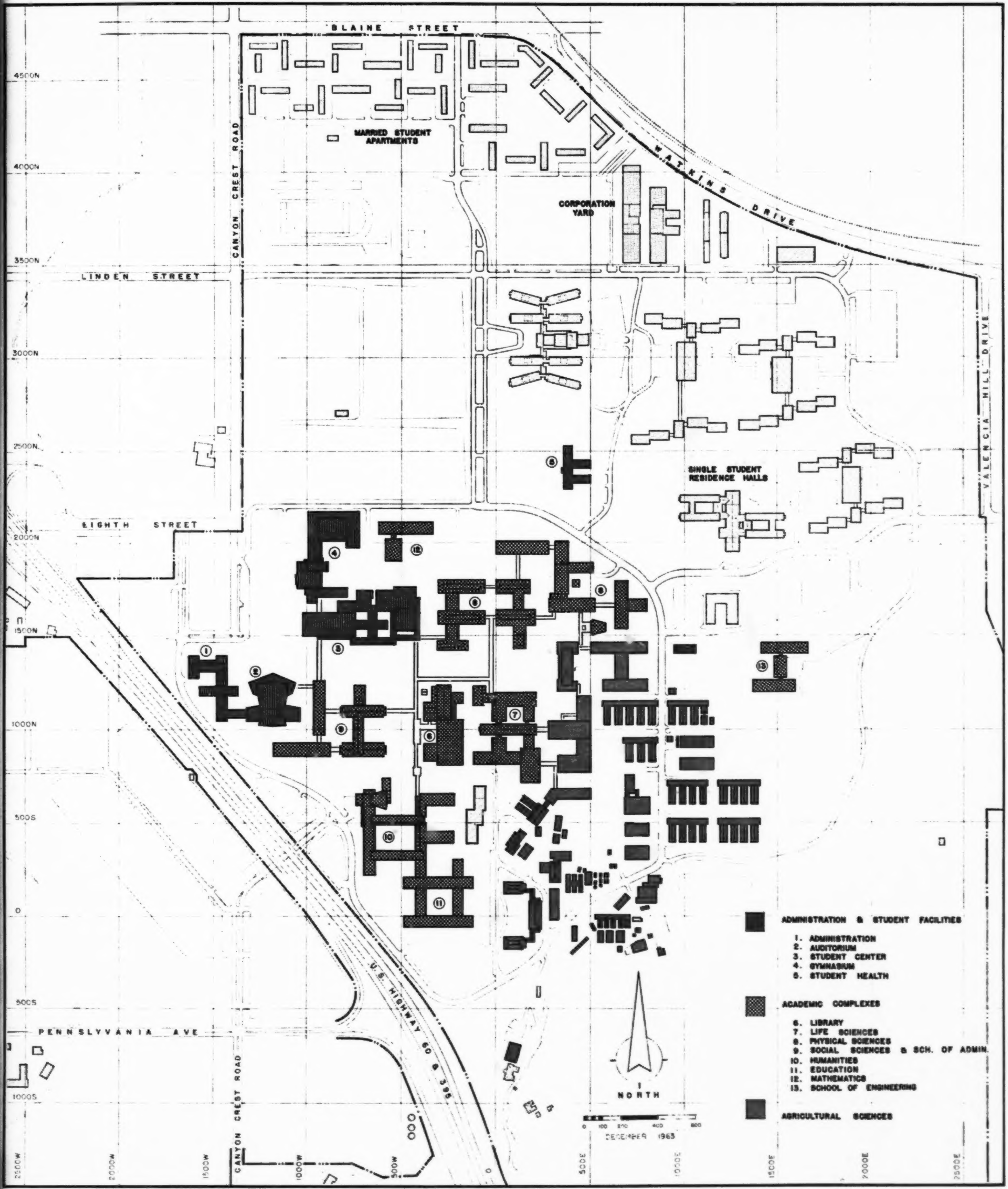
The automobile is one of the great problems of the American campus and lack of appropriately located parking areas has caused the ruin of some of the nation's most attractive institutions. In many cases the motor car has penetrated into the very heart of the academic close, and where once a pleasant student-faculty gathering place might have existed the forum is now occupied by the dubiously attractive parking lots. Every effort should be made to preserve the Academic Center for pedestrian use and, with this principle in mind, all general automotive traffic will be excluded within the peripheral circulation pattern. Each academic division will be served by cul-de-sac entries stemming from the perimeter road — these will provide minimal parking for high priority vehicles; general faculty, staff members and students would be barred from service roads. Parking for faculty and staff members has been provided at various strategic locations adjacent to the Academic Center. Beyond this girdle of restricted parking larger areas have been provided for student and junior staff use. All such space is on ground level but parking structures can be constructed if needs for these develop. The faculty parking area provided to the northeast of the Academic Center occupies a filled ravine which upon occasions has been subjected to flood and erosion. As a precautionary measure existing drainage facilities are being augmented. Even though the threat of damage is remote, the placing of buildings on the ravine area has been purposely avoided.

The major portion of student parking facilities is located across the Freeway (U. S. Highway 60) to the southwest of the Academic Center on land now being used for CRC-AES purposes. In order to provide surface parking for a large portion of the anticipated maximum parking load, the CRC-AES must eventually relinquish about 35 acres of experimental crop land for parking use. Access to the academic center parking areas southwest of the Freeway will be gained by means of a major underpass which will accommodate both motor vehicles and pedestrians and by a future pedestrian underpass under the Freeway fill near the Eighth Street interchange. Walking times from the southwest parking area to the core of the Academic Center would, for the most part, not exceed ten minutes.

Adequate parking for resident students is located within reasonable distance of residence halls and married students' housing, although in the case of the latter, parking structures might be required if population density is increased beyond that now forecast. No special parking facilities have been provided for major athletic events; general parking areas will serve on those infrequent occasions as they will for large public gatherings in the proposed auditorium. Visitors' parking areas have been located near entrances to the Administration Center and Residence Halls.

Continuing effort should be made to relieve the monotony of vast asphalt surfaces by the use of landscaping. Space allotted to parking allows for this and, considering the region, it is felt that this provision is not an extravagant objective. Access to parking areas and general traffic patterns are discussed on page 15.

New forecasts of parking needs based on a study of utilization since 1960 indicate that fewer parking spaces (7,850 vs 10,375) will be required upon full development of the campus than had been anticipated in the 1960 Plan. (See Table No. 7) If the new predictions prove to be inadequate and present enrollment projections are not maintained, necessary adjustments can be made within the available acreage without the use of parking structures.


BLAINE STREET
MARRIED STUDENT APARTMENTS
WATKINS DRIVE
CORPORATION YARD
CANYON CREST ROAD
LINDEN STREET
VALENCIA HILL DRIVE
SINGLE STUDENT RESIDENCE HALLS
EIGHTH STREET
PENNSLYVANIA AVE
U.S. HIGHWAY 60 & 395
4500N
4000N
3500N
3000N
2500N
2000N
1500N
1000N
500N
0
500S
1000S
2500W
2000W
1500W
1000W
500W
0
500E
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1500E
2000E
2500E
NORTH
0 100 200 400 600
DECEMBER 1963
ADMINISTRATION & STUDENT FACILITIES
1. ADMINISTRATION
2. AUDITORIUM
3. STUDENT CENTER
4. GYMNASIUM
5. STUDENT HEALTH
ACADEMIC COMPLEXES
6. LIBRARY
7. LIFE SCIENCES
8. PHYSICAL SCIENCES
9. SOCIAL SCIENCES & SCH. OF ADMIN.
10. HUMANITIES
11. EDUCATION
12. MATHEMATICS
13. SCHOOL OF ENGINEERING
AGRICULTURAL SCIENCES

DRAWING NO. 5 ACADEMIC RELATIONSHIPS

UCR

LONG RANGE DEVELOPMENT PLAN

UNIVERSITY OF CALIFORNIA, RIVERSIDE

GEORGE VERNON RUSSELL F.A.I.A. & ASSOCIATES

ACADEMIC FACILITIES

SOCIAL SCIENCES

The existing Social Sciences Building houses the departments of Anthropology, Economics, Education, Geography, Mathematics, Sociology, a portion of Psychology, and the telephone switchboard and equipment rooms. In the past the building also accommodated all the Psychology Department, the Humanities and even served as the Campus Administration Center. Upon completion of the new Administration Center and the recently completed Humanities facility, space in the Social Sciences Building was relinquished for expansion of the Social Science departments and temporary relocation of the Department of Mathematics. A portion of the Psychology Department has also been temporarily relocated in the Physical Education Building thereby providing more space for Social Science programs.

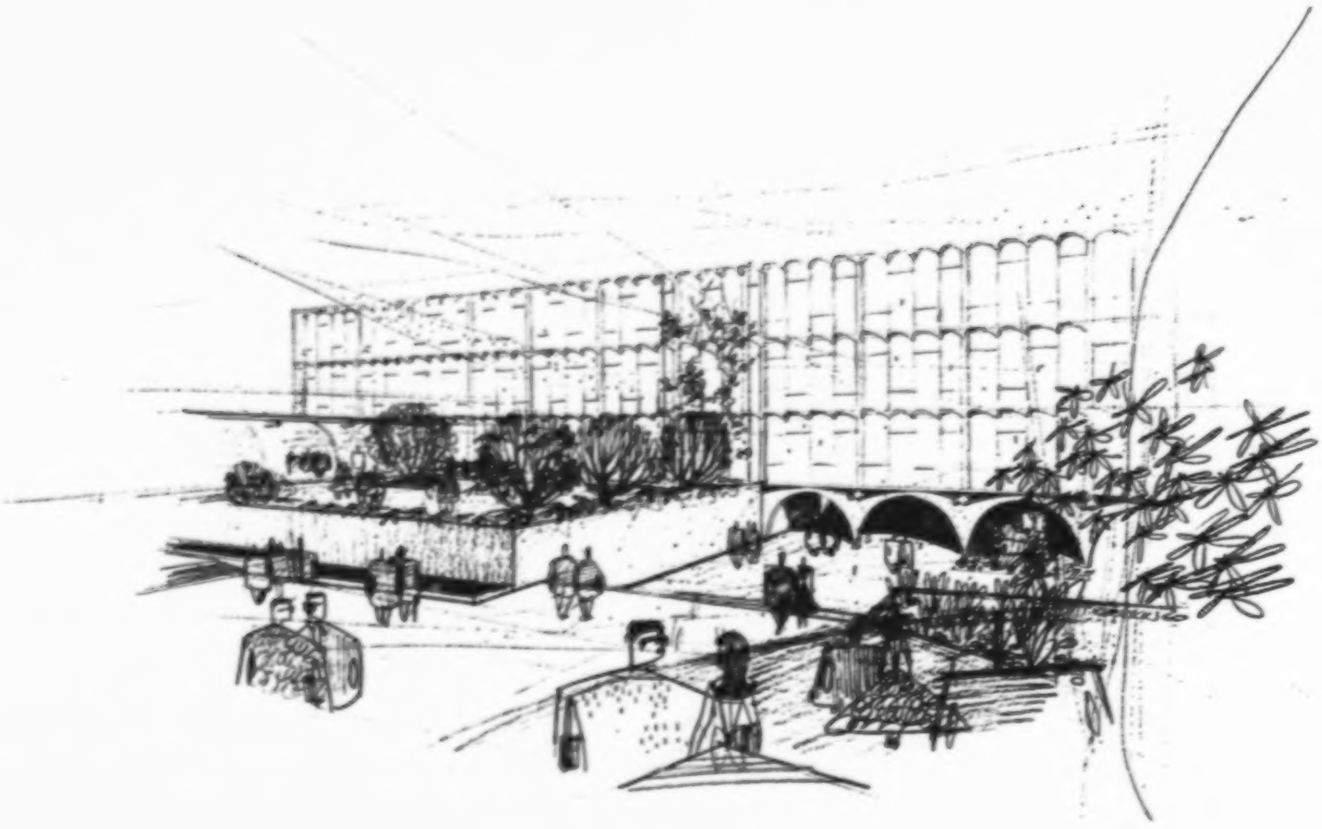
A new major building (73,000 gross sq. ft.) is now being designed for a site to the west of the existing facility and although it will be closely related to the Social Sciences unit, it will provide classrooms and laboratories for Mathematics, Education, instructional T. V. studios, and equipment which will serve all departments. It will also house the offices of the Dean of the College of Letters and Science.

A new building for Mathematics has been indicated north of the central campus and east of extended Physical Education facilities. It is discussed on page 28. The shifting of Mathematics and the later relocation of Education will permit expansion of the Social Sciences into the vacated area. When Mathematics and Education are both relocated at a future date the building complex indicated on the Long Range Development Plan will provide ample space for the projected needs of Social Science disciplines, School Administration, instructional T. V., and offices of the Dean of the College of Letters and Science.

It is estimated that with a 10,000 student campus Mathematics and Education will each require 40,000 ASF of space. As more precise long range plans for Mathematics and Education are developed, adjustments in their eventual relocation may be necessary in the next review of the Long Range Development Plan.

Space to the northwest of the present Social Sciences Building should be reserved for the eventual construction of the major auditorium.

	Existing	10,000 Student Campus
Assignable Area, sq. ft.	33,488	70,000
Gross Area, sq. ft.	58,590	116,000



HUMANITIES

HUMANITIES

The first increment of a major building complex for Humanities Departments was completed early in 1963. The new facility includes faculty offices, classrooms, language laboratories, and lecture rooms as well as studios for the Art Department, practice rooms, rehearsal rooms and classrooms for the Music Department, work shops and seminar rooms for the Drama Department and a fully equipped small theater (500 seats) which will serve primarily the Drama and Music Departments; the theater must also serve the entire University on special occasions until the proposed 2,500 seat Auditorium becomes a reality.

The north facade of the building provides a completed termination to the North-South mall. Future extensions to the south will relocate the expading Art Department and provide greatly enlarged facilities for the other departments.

The Long Range Development Plan suggests that a fitting termination to the proposed composition of buildings could be effected by locating one of the anticipated professional schools at the south end of the complex.

Following is a projection of the space needs for Humanities requirements:

	Existing	10,000 Student Campus
Assignable Area, sq. ft.	53,783	195,000
Gross Area, sq. ft.	101,020	320,000

LIFE SCIENCES AND PSYCHOLOGY

The Life Sciences include the subject fields of Biology, Botany, Microbiology, and Zoology; they now occupy a building containing an area of 30,070 assignable square feet. A 48,140 ASF addition to the building is proposed in the current Major Capital Improvement program, of which one wing containing 17,400 ASF will be occupied by the Psychology Department which is now housed in the Physical Education Building.

Expansion of Life Sciences and Psychology facilities is limited by the library building to the west and the Agricultural Sciences building now being planned for construction to the east. Under these circumstances the final increment of the Life Sciences will be designed with at least four stories above grade; however, due to its distance from the original east-west mall, it will not impinge on existing buildings of smaller scale. Planning of Life Sciences Unit 2 is somewhat complicated by the probability of funds being granted for extensions of the program by two Federal agencies. The amount of the grants, if forthcoming, cannot be determined at this date; consequently the configuration and size of certain wings of the new structure are still subject to further study.

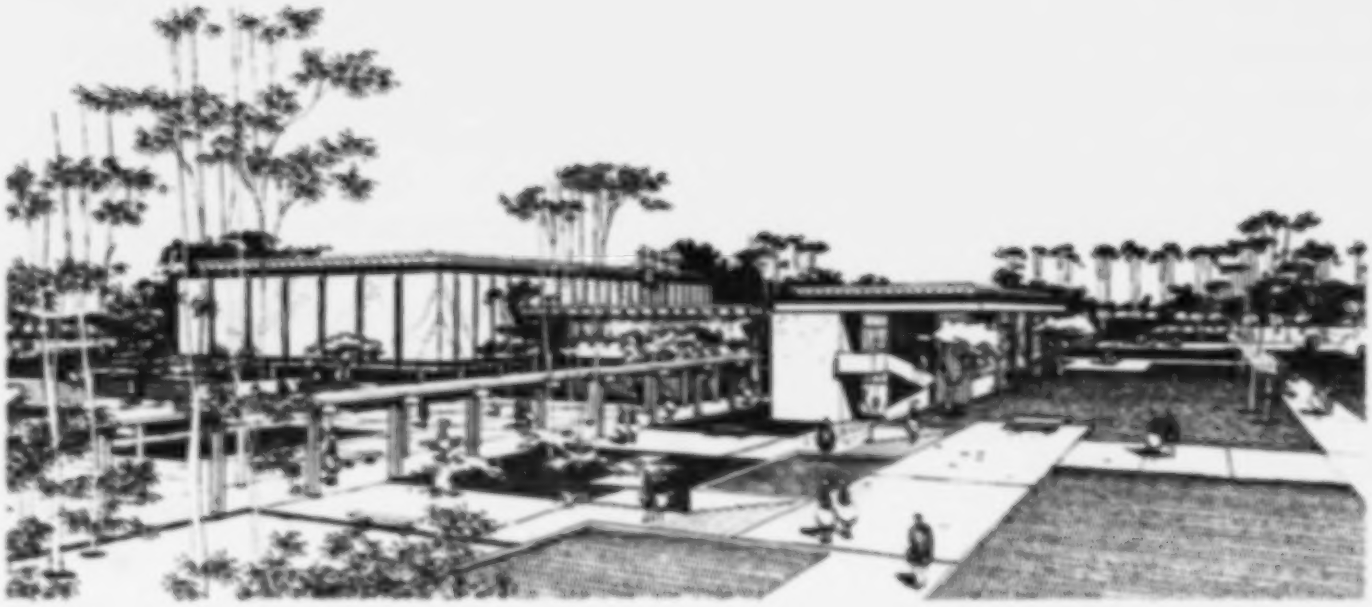
	Existing*	10,000 Student Campus
Assignable Area, sq. ft.	30,070	167,000
Gross Area, sq. ft.	51,540	277,000

	ASF	Gross
*Life Sciences Unit II in Preliminary Design Not Included in Existing Area	48,140	82,320

MATHEMATICS

The Mathematics Department, along with Education, will be housed for some time in the Classroom and Office Unit I which is scheduled for completion in 1965, but eventual expansion of the two departments will require construction of new buildings for both Education and Mathematics. The area programed for Mathematics in Classroom and Office Unit I will meet the needs of that department through 1969-70 and the facilities will be general enough in design to permit subsequent, inexpensive conversion for use by other departments. The need for additional Mathematics space after 1969-70 and the relative simplicity of the facilities required suggest that relocation of this department is both necessary and economically feasible. A separate building has been indicated in the Long Range Development Plan. The site, north of the Student Center, is conveniently located in respect to the Physical Sciences complex.

Estimated requirements for ultimate development call for a building with an area of 67,000 square feet (gross) for Mathematics.



PHYSICAL SCIENCES

PHYSICAL SCIENCES

The Physical Sciences include Physics, Chemistry and Geology. Existing faculties (Units I and II) provide an area of 53,582 ASF soon to be augmented by a new building (Unit III) which will provide an additional 57,425 ASF for the exclusive use of the Physics Department. Preliminary designs for a new Chemistry Building (Unit IV) have been approved and construction of this building should be completed by the end of 1965, providing 47,875 ASF. National Science Foundation funds have been granted for the inclusion of special facilities in Unit III and Unit IV.

The Physical Sciences, like the Life Sciences, require a large proportion of laboratory space, thereby considerably increasing the ratio of assignable square feet per student.

The resulting decrease in building population density alleviates many of the problems created by vertical circulation; hence, some elements of the complex might have four stories above ground. These higher structures should be located on the periphery of the academic center to avoid conflict of scale with existing smaller buildings.

The Physical Sciences will finally be housed in an ensemble of buildings whose area will exceed 485,000 gross square feet — the largest complex on the campus. Many purposes must be served in the various wings of the group of structures and it is felt that the suggested expansion program will provide the flexibility necessary for unimpeded departmental growth.

	Existing*	10,000 Student Campus
Assignable Area, sq. ft.	53,582	290,000
Gross Area, sq. ft.	84,741	485,000

*Projects in Process But Not Included as Existing:

	ASF	Gross
Unit III, Physics, Under Construction (1964)	57,425	92,000
Unit IV, Chemistry, Under Construction (1964)	47,875	78,941

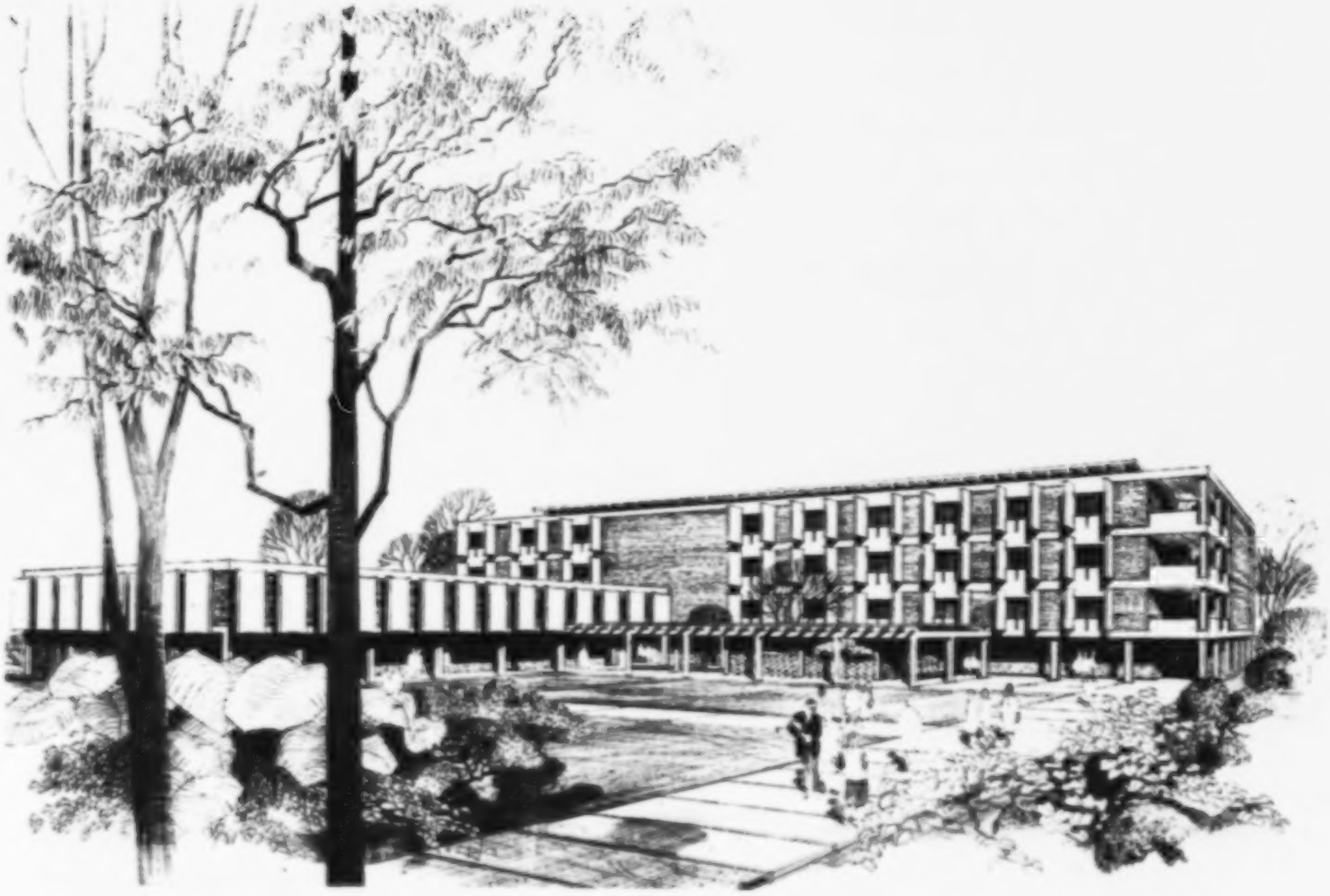
AGRICULTURAL SCIENCES

Undergraduate instruction in the new College of Agriculture began in the fall semester of 1961, with a curriculum representing a wide departure from traditional patterns of agricultural education in the United States. At Riverside the emphasis is on a broad, general education in the humanities and social sciences as well as in the basic biological and physical sciences.

Students may elect fields of interest from Agricultural Science, Agronomy, Biochemistry, Entomology, Horticultural Science, Nematology, Plant Pathology, Soil Science and Vegetable Crops. A substantial proportion of students in agriculture continue their education in graduate schools and the curriculum emphasizes the basic courses which will prepare them for advanced study. Instruction is offered by a faculty drawn chiefly from the academic research staff of the Citrus Research Center and Agricultural Experiment Station in somewhat scattered facilities.

Plans for a new major building for the Agricultural Sciences are in process and the building should be completed in 1966. The building will provide an area of 46,182 assignable square feet.

Due to an intermeshing of activities of the College of Agriculture with those of the Citrus Research Center and Agricultural Experiment Station, and the close relationship of the Life Sciences, the new Agricultural Sciences building has been located at the southeast



AGRICULTURAL SCIENCES

corner of the Academic Center — convenient to all of the aforementioned facilities. Because of the inter-relationship between the various activities in agriculture which sometimes calls for joint occupancy of some buildings and, on numerous occasions, the same spaces, the College of Agriculture and CRC-AES facilities are indicated as a single unit in the delineation of the various fields of study (Drawing #5). The future needs of the College of Agriculture and the CRC-AES are separately tabulated in Table #2.

	Existing*	10,000 Student Campus
Assignable Area, sq. ft.	Combined with CRC-AES	(See Table No. 2)
Gross Area, sq. ft.	Combined with CRC-AES	
	ASF	Gross
*Agricultural Science Bldg. Working Drawings in Process (1964)	46,182	77,625

PROFESSIONAL PROGRAMS

The Long Range Development Plan indicates separate buildings for future professional schools or colleges — the academic characters of which have so far not been specifically established.

Tentatively a School of Administration is to be located within the Social Sciences Building. Space vacated by the relocation of Mathematics and Education plus construction of additions to this complex will provide for the needs of both Social Sciences Departments and the School of Administration.

An Engineering School whose program might logically emphasize the areas of chemical and electrical engineering, because of the closely related interests of existing strong departments in physics, chemistry, and mathematics, has been indicated on the Plan. Its location at the east end of the academic center is the closest possible convenience relationship to the Physical Sciences complex.

More extensive Education Department facilities have been strongly favored as another possibility in the expansion program. The new Classroom-Office building now being designed will house Education temporarily, but its ultimate need for 40,000 ASF will necessitate its relocation in the southern part of the Humanities complex.

Information regarding the requirements of these programs has not been sufficient for the establishment of definite building dimensions or configurations at this date, but adequate space has been provided for substantial academic activities in these fields.

SCHOOL OF ADMINISTRATION

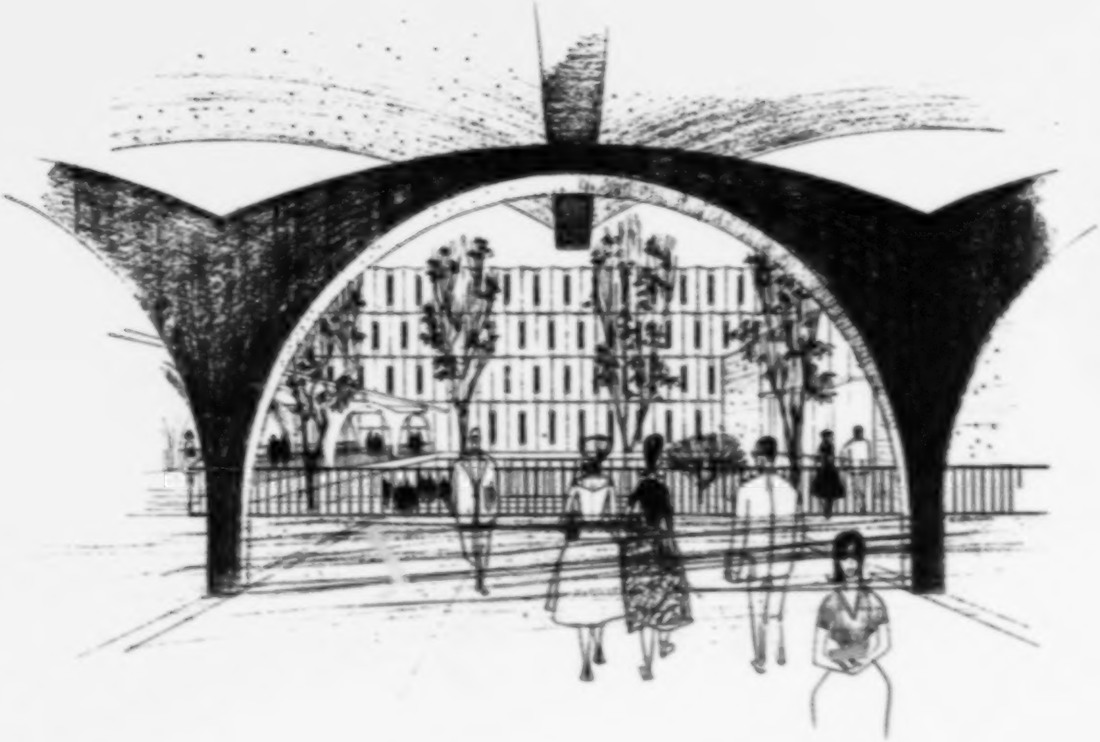
	ASF	Gross
Existing	none	
10,000 Student Campus	30,000	50,000

SCHOOL OF ENGINEERING

Existing	none	
10,000 Student Campus	75,000	125,000

EDUCATION

Existing	Included in Social Sciences	
10,000 Student Campus	40,000	67,000



LIBRARY

LIBRARY

Incremental growth of a major library generates many problems in design and coordination of subsequent construction programs. Faculty committees strongly recommend that preliminary designs be prepared for the "horizon" structure—one that will house 1,000,000 volumes and accommodate the anticipated maximum enrollment. This course has been followed.

The small scale of the original structure, based on long since changed enrollment objectives, has aggravated the difficulties created by the incremental growth program; the additions will be outstanding cases of tails wagging the dog.

Construction of the first expansion phase was completed in the fall of 1963. The present total capacity of the library is approximately 356,000 volumes and 450,000 documents with seating for 850 students.

One more expansion phase is presently planned for completion by Fall 1968. This addition will contain approximately 123,000 gross square feet and will increase the total campus-wide capacity to 1,000,000 volumes and 940,000 documents with seating for 2500 students. The new structure will provide sufficient Library area to meet the space needs of the present enrollment target of 10,000 students.

Initially, approximately two-fifths of the new addition will be allocated to the Library to fulfill capacity and seating needs through 1970-71. The remaining space will be temporarily assigned to the Departments of History and Philosophy and various administrative offices presently located in the Administration Building. After 1970-71, the temporary occupants will gradually be re-located in new buildings elsewhere on campus and the Library will expand into the vacated areas.

With the many conditions imposed, design of the library is a difficult task and until its completion — along with alterations of the original building — its bulk will not be an entirely satisfactory member of the community of campus buildings. Its functions seem to preclude the addition of wings and courts, similar to those being created in structures housing specialized fields of learning, and composure will come only by completion of its master plan.

A specialized branch library currently exists in the Physical Sciences Building and one is planned for the Agricultural Sciences Building. These are specialized in subject matter and will account for the difference between the long range projected area and the 220,000 sq. ft. gross area for the main library building.

	Existing	10,000 Student Campus
Assignable Area, sq. ft.	74,295*	165,000**
Gross Area, sq. ft.	100,360	240,000

*Plus 2,066 assignable (2,950 gross) square feet in the Physical Sciences Branch Library

**Includes the square footage requirements in the main library building and all branch libraries

ADMINISTRATIVE, FACULTY AND STUDENT SERVICES

ADMINISTRATION CENTER

The first unit of a new Administration Center has been completed at the extreme westerly end of the Academic Center. An appreciable addition to this Center will be necessary by 1972 and the future extension to the south should enhance the appearance of the present structure.

The main entry landscape treatment provides an attractive and dignified buffer zone between academic and community activities. It also establishes a traffic pattern which will accommodate public transport, visitors and through traffic without generating major pedestrian crossing problems. A control and traffic information center will be an early necessity. Through traffic on Canyon Crest Drive can at that time be restricted. Staff parking has been provided on the west side of Canyon Crest for Administrative staff.

	Existing	10,000 Student Campus
Assignable Area, sq. ft.	25,014	65,000
Gross Area, sq. ft.	41,000	108,000

FACULTY CLUB

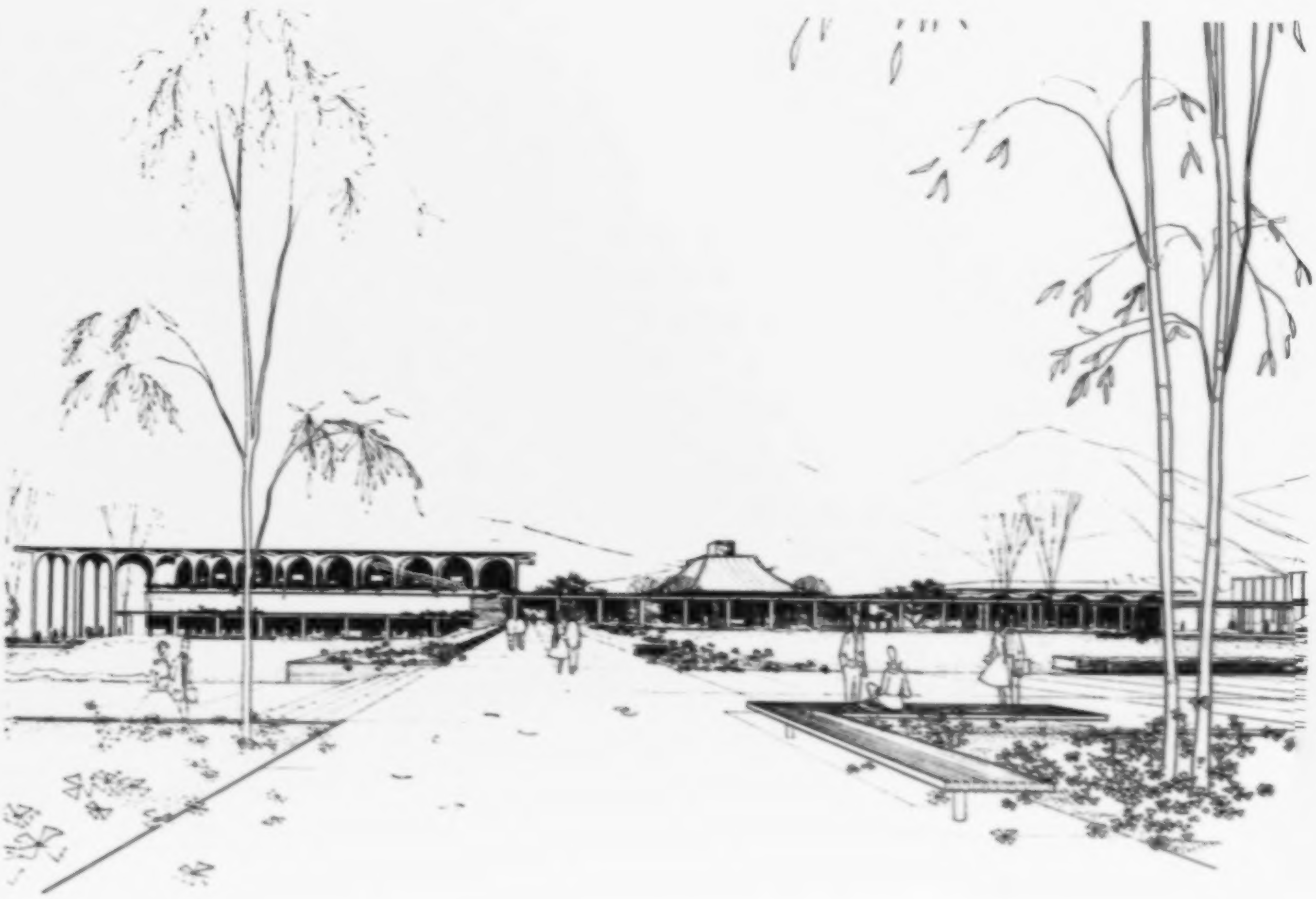
University history indicates that the measure of greatness is the degree to which scholars and thinkers gather to work in an intellectual atmosphere of teaching, investigation, and the exchange of ideas. The Faculty Club provides a common gathering place for the wide variety of scholars working on the campus and is a strong factor in the fulfillment of these objectives.

The UCR Faculty Club has been established for some time near CRC-AES facilities and continued use of this site has been strongly recommended by faculty committees.

Additional minimal expansion and renovation are proposed but the improvement program now under consideration would provide only relative limited facilities for the demand expected in 1970 — and would be inadequate for "horizon" developments.

Although committees concerned with campus planning are unanimous in the opinion that the present site should be retained, they also agree that a new and larger structure will be needed within the foreseeable future. Its separation from the Student Center is strongly recommended.

The existing structure is of a somewhat temporary nature and its eventual demolition and subsequent replacement by a larger building will, in the long run, be more economical than piecemeal additions.



STUDENT CENTER

STUDENT CENTER

The site for the Student Center was chosen because of its central location, lack of interference with expansion of academic facilities, and its proximity to parking areas which will serve students, staff and, on frequent occasions, guests for evening affairs. The bulk of parking facilities for commuting students is toward the westerly side of the campus and it is hoped that the Student Center will serve as a "rallying point" on their way to and from the University.

The problem of incremental construction confronts the executive architects of the Student Center and the attractiveness of their design will not become altogether apparent until the structure is finally completed. However, opportunities for distinctive architectural configuration are being fully realized in the building scheduled for early construction.

Completion of the Student Center will make possible the demolition of an unsightly minor structure whose scale is in sharp and unattractive contrast to the larger permanent buildings now under construction or in the process of design.

	Existing*	10,000 Student Campus
Assignable Area, sq. ft.	3,969	89,000
Gross Area, sq. ft.	6,200	136,000
	ASF	Gross
*Cafeteria-Student Center Working Drawings in Process (1964)	44,180	68,000

STUDENT HEALTH CENTER

The Student Health Center site is strategically located between the Academic Center, residence hall groups and playing fields. It is close to the major perimeter road, yet the suggested landscaped areas will insulate the building from noisy campus or residence hall activities.

On-campus residents and athletic participants present the most serious cases for treatment or confinement; the location serves both equally well. Facilities include examination, diagnostic and treatment departments, along with wards and isolation rooms for confined patients. Plans provide for incremental expansion as needs increase.

	Existing	10,000 Student Campus
Assignable Area, sq. ft.	7,229	30,000
Gross Area, sq. ft.	12,125	50,000

AUDITORIUM

The Plan indicates an Auditorium with a seating capacity of 2,500, along with facilities for large scale concerts and other cultural attractions.

The Auditorium would serve as an important link with the community and its proposed location was established with this relationship in mind; proximity to a large parking area, the Student Center, the Campus Plaza, and, to a lesser extent, a close physical relationship to the Administration Center were also factors leading to the choice of the suggested site. The outline form for the Auditorium shown on the Long Range Development Plan map is tentative. It will be essential to integrate the need for unimpeded access to the Auditorium by large numbers of people with a functional need of the entrance to serve as an outdoor stage or podium for gatherings which utilize the plaza for meetings.

(See Section on Student Center)

	Existing	10,000 Student Campus
Assignable Area, sq. ft.	None	54,000
Gross Area, sq. ft.	None	90,000

CORPORATION YARD

The 12-acre corporation yard is located on the northern border of the campus between married student housing and the area chosen for Residence Halls. It is also within reasonable distance of the Academic Center but somewhat remote from the Citrus Research Center area. Railroad facilities and a principal thoroughfare (Watkins Drive) establish the north border of the yard and provide easy access for trucks and other service vehicles without need for intruding into the campus road system. In spite of a degree of interference with the continuity of peripheral parking and some limitation to the configuration of the Residence Hall complex, this location is the best one for this necessary and important facility.

The site is entirely usable and adequate space for expansion has been provided.

	Existing	10,000 Student Campus
Assignable Area, sq. ft.	30,352	60,000
Gross Area, sq. ft.	32,790	100,000

CUSTODIAL AND GROUNDS SERVICES

The Custodial and Grounds Services operate at this time from temporary quarters at several locations scattered about the campus. Early in 1964 an Headquarters Building containing storage, office, and training space will be constructed and will permit consolidation of these quarters for improved efficiency. The Headquarters Building contains approximately 4,800 gross square feet and is to be located near the perimeter road, east of Picnic Hill. The site provides a location reasonably central to areas where most of the personnel will work and it also allows for future doubling of the building capacity which should serve the needs of a 10,000 student campus.

PHYSICAL EDUCATION AND RECREATIONAL FACILITIES

GYMNASIA

The existing UCR gymnasium serves both men and women and was designed for an enrollment of 1,500 students. Although there is 41,048 assignable footage existing in the Physical Education Building, the University Bookstore occupies 2,500 ASF and the Psychology Department occupies 5,500 ASF of this total. The Physical Education Department will not gain full utilization of this building until 1967 when the last of the two temporary occupants is relocated. High priority has been given to the planning of major extensions to present facilities. These will provide another gymnasium floor, an additional swimming pool, new locker rooms for men, department offices and spectator seating accommodations. Although the new gymnasium will provide 3,000 seats for sports events, present planning considerations do not call for "field house" configuration or dimensions.

Departmental centralization, flexibility of floor use and distance from the campus center are strong factors in the location of the new gymnasium which has been placed contiguous to existing facilities.

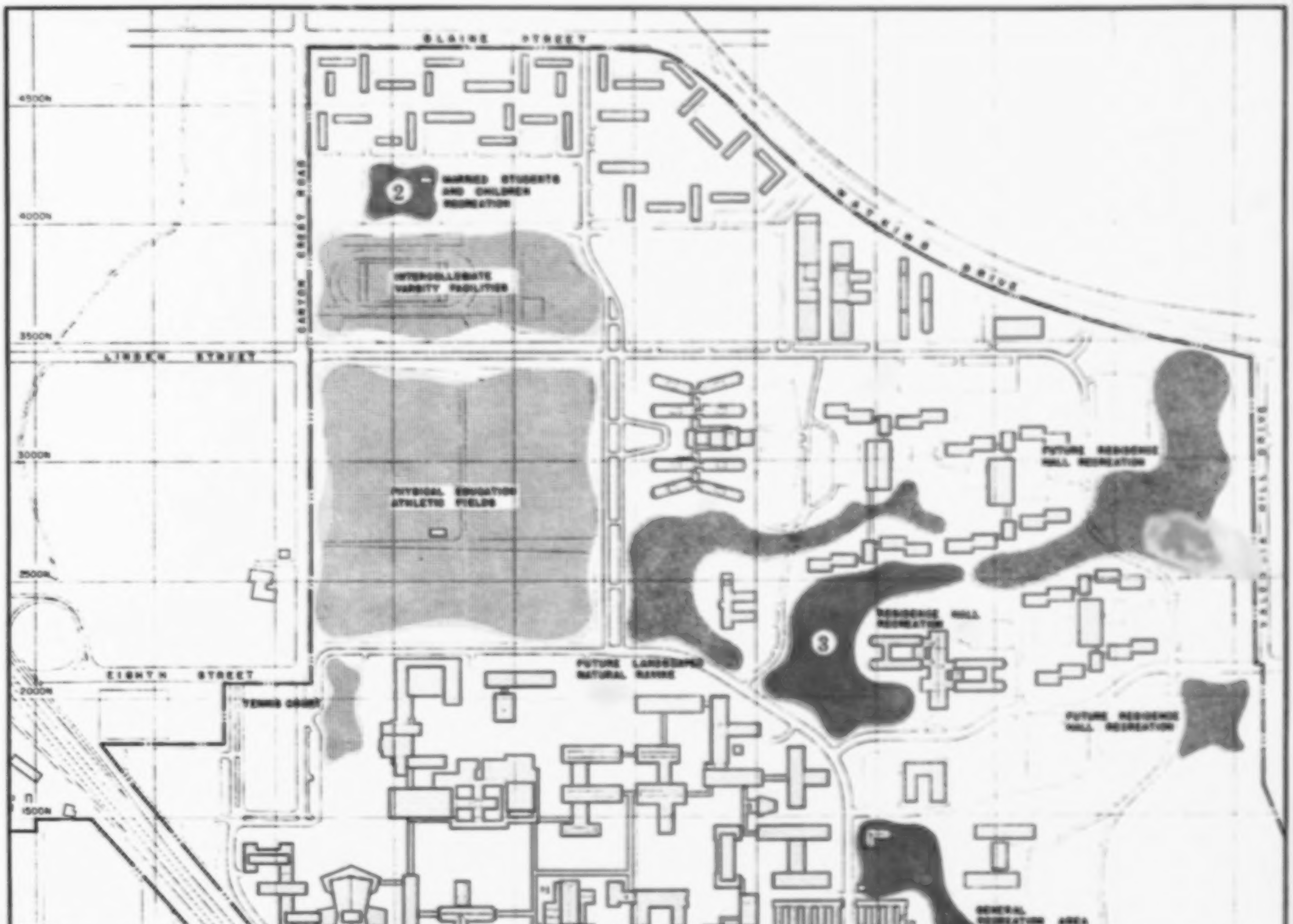
	Existing	10,000 Student Campus
Assignable Area, sq. ft.	41,048	86,000
Gross Area, sq. ft.	59,880	145,000

ATHLETIC FIELDS

At present intramural and varsity athletic fields occupy 33 acres. Requirements for 10,000 students call for 45 acres — the space needed being for the most part based on activities rather than numbers of students. Early need for increased space should be provided by conversion of surface parking facilities now on the site of future developments. Facilities for physical education activities should be located as near as possible to the gymnasium and to the Academic Center. The road between the gymnasium and athletic fields should be closed to casual traffic.

Varsity athletic programs call for long practice periods and the problem of proximity to the Academic Center is less acute than that presented by intramural activities. At present the location of the track and football field precludes expansion to the north and additional factors prohibit extension in other directions. Under these circumstances the existing track and football field should in the future be moved to the north of Linden Avenue to space now occupied by some married student housing. With the exception of the field lighting system now installed and capable of being relocated, no permanent structures impede the proposed expansion. The existing field and track can be used as an auxiliary facility or might be easily changed to fit new purposes.

Future development of the new varsity field and track will provide permanent seating with team rooms, showers, equipment storage, rest rooms, etc., under permanent stands for 12,000 spectators.


BLAINE STREET
WATKINS DRIVE
LINDEN STREET
CANYON CREST ROAD
EIGHTH STREET
VALENCIA HILL DRIVE
PENNSYLVANIA AVE
U.S. HIGHWAY 60 & 395
2
MARRIED STUDENTS AND CHILDREN RECREATION
INTERCOLLEGIATE VARSITY FACILITIES
PHYSICAL EDUCATION ATHLETIC FIELDS
TENNIS COURT
FUTURE LANDSCAPED NATURAL RAVINE
3
RESIDENCE HALL RECREATION
FUTURE RESIDENCE HALL RECREATION
FUTURE RESIDENCE HALL RECREATION
4
GENERAL RECREATION AREA
1
PICNIC HILL
LIFE SCIENCE EXPERIMENTAL AREA AND ARBORETUM
NORTH
DECEMBER 1963
4500N
4000N
3500N
3000N
2500N
2000N
1500N
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DRAWING NO. 6

RECREATIONAL AREAS AND STUDENT ACTIVITIES

UCR

LONG RANGE DEVELOPMENT PLAN
UNIVERSITY OF CALIFORNIA, RIVERSIDE
GEORGE VERNON RUSSELL F.A.I.A. & ASSOCIATES

RECREATION AREAS

A study of sites suitable for general recreation areas similar to the Strawberry Canyon development in Berkeley resulted in the recommendation by the Campus Planning Committee that four of these be developed, each in a different manner and for different purposes.

Decentralized facilities are suggested as more convenient to using groups and more friendly in scale than a single "department store" type of installation. Some of the small sites chosen seemed unusable for other purposes and this fact has contributed to the decision to vary the character of the several facilities.

The site and proposed objectives are listed below.

1. Picnic Hill — a simple clearing among the beautiful trees which surround the CRC-AES facilities. This quiet area has long been a favorite spot and needs only restroom facilities to make it fully suitable for casual recreation and picnicking.
2. Married Students' and Children's Recreation — a development of an abandoned 5-acre school site in the middle of married student housing facilities. Proposed facilities will provide restrooms and a shade pavilion, playgrounds and equipment for the very young, and a softball field, horseshoe pits, and other recreational areas for married students and older children. Eventual plans call for a slight encroachment into this area by a major athletic field and spectator seating but most of the facilities can be retained if the Plan is followed.
3. Residence Hall Recreation — a development of the major canyon running through the section of the campus which has been earmarked for Residence Halls. Volley ball courts, archery ranges and a modest pitch-and-put golf course are informally located in the bed of the canyon. Flood control measures will materially reduce danger of washout during heavy rains.
4. General Recreational Area — a development of a canyon to the east of the academic center and to the north-east of the CRC-AES. The facilities of this area will be similar to those of Berkeley's Strawberry Canyon development though on a reduced scale. Tennis courts, a swimming pool, dressing rooms and shade pavilions will be provided for the faculty, staff and student body. The Long Range Development Plan indicates that the Barn (see Campus Landmarks) is to be moved to this recreation area where it will continue to serve as a well-loved center for many activities connected with the General Recreation Area. Acreage reserved for botanical study and gardens lies to the east and southeast of the recreation development. Portions of these gardens correlated to the plan of the recreation area may be opened to the public for undoubtedly the two facilities will complement each other.

CITRUS RESEARCH CENTER AND AGRICULTURAL EXPERIMENT STATION

The Citrus Experiment Station, a part of the California Agricultural Experiment Station and a major operational unit on the Riverside Campus, was established in 1907 and located on its present site in 1917. In 1961 the name of the Citrus Experiment Station was changed to the Citrus Research Center and Agricultural Experiment Station (CRC-AES). Expanded activities now include research on a broad spectrum of subjects ranging from fundamental problems in biology, ecology, breeding, culture, and protection of economic plants to application of new findings to applied problems of agriculture.

Nine departments are active in various fields of specialized study and many programs are carried on with special agencies, government services, grower organizations and foundations.

A change in the character of southern California agriculture has called for a review of CRC-AES policy and a broadening of its fields of endeavor. The recent establishment of a College of Agriculture and the rapidly growing graduate instruction program in the Agricultural Sciences at UCR are in line with the expanded research program of the CRC-AES, and although the College operates as an administrative entity, most facilities are shared. This "combined facility" concept affords the most efficient and economical way of continuing local agricultural instruction and research. Accordingly, this concept is embodied in all future physical planning for expansion of the Agricultural Sciences.

Land requirements of the expanded campus and the new freeway have already made some inroads on CRC-AES experimental growing areas and ultimate campus expansion will necessitate encroachment on additional acres of land now under cultivation. To offset this loss, farm lands have been acquired away from the campus and new research programs are being instituted thereon. However, headquarters and laboratory facilities, including greenhouses and field buildings will be maintained on the present site. It is anticipated that the combined assignable area for CRC-AES, the College of Agriculture, and the Departments' graduate instruction requirements will be expanded from the 204,480 square feet to 462,000 square feet. The major share of this expansion will be required to accommodate the graduate programs.

Existing buildings are of an early vintage and have little or no relationship to those on the main campus; however, the architectural characters of the early structures should be recognized in new CRC-AES additions.

During the comparatively long history of the CRC-AES, growth sheds, racks, shelters, etc., have in many cases been badly designed and indiscriminately placed. Future programs should include the consolidation or elimination of many of the small and unsightly structures which clutter up the attractive site and hamper the planning of expanded facilities.

University-owned land to the southeast of the major CRC-AES buildings affords plenty of topographically attractive space for contiguous expansion. This area might also be used for the auxiliary organized research units. (See page 45.)

OTHER ORGANIZATIONS AND ACTIVITIES

UNIVERSITY EXTENSION

This office opened in 1954 on the Riverside campus, and now serves some 26 communities in Riverside and San Bernardino counties by offering approximately 95 courses of instruction. Courses given have been in education, agriculture, science, business administration, engineering, and law, as well as in basic Letters and Science. At present this office, which has provided much help to the Committee on Arts and Lectures, is housed in the Administration Center and no provision has been made for its relocation. Expansion of the Administration Center however will provide additional space for its growing activities.

AGRICULTURAL EXTENSION

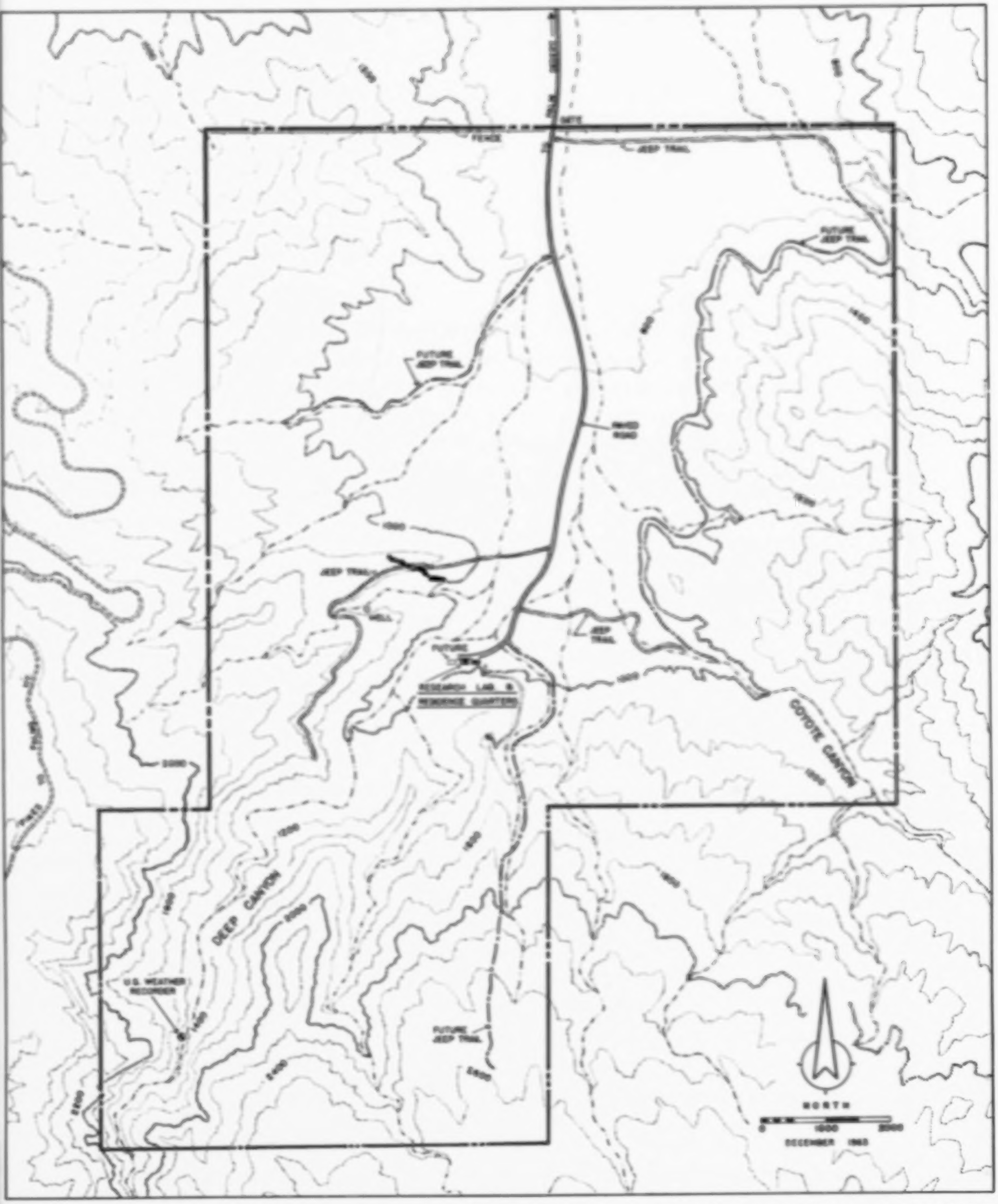
The Southern California Regional Office was established on the Riverside campus in 1954. Specialists serve the area in farm management, marketing, entomology, home economics, plant diseases, nematology, soils, water management, citrus and avocados, vegetable crops, plant growth regulators and air pollution. The design of a sizeable addition to Agricultural Extension facilities has been approved, and its construction is underway (Spring 1964).

AIR POLLUTION RESEARCH CENTER

This Center's present and future activities include the causes and effects of air pollution and resultant control measures in the social, economic and political life of the community. The Center will share the facilities of the new Environmental Pollution Laboratory — a building in which research on pollution in its broadest aspects will be conducted. Other small research facilities are installed at various locations on the campus, which in their present state are not architecturally attractive. This important field of study should eventually be housed in more suitable quarters in an area east of the proposed School of Engineering.

THE PHILIP L. BOYD DESERT RESEARCH CENTER

In 1959 Regent Boyd donated to the University 1,500 acres of land in Deep Canyon, south of Palm Desert. Subsequently he has given funds for the purchase of 1,920 additional acres contiguous to the original tract. Thus the University has acquired a block of 3,420 acres of virgin desert land upon which a biological section devoted to basic scientific studies of desert plants and animals is rapidly developing. Appropriate fencing of the area and laboratory facilities have been constructed with funds derived from gifts and a National Science Foundation grant. Already important studies have been started, and it is clearly apparent that UCR has a facility which will utilize the scientific energies of many of the faculty of the campus and which will also serve as a focal point for desert studies. (See Drawing #7).


GATE
FENCE
JEEP TRAIL
FUTURE JEEP TRAIL
FUTURE JEEP TRAIL
PAVED ROAD
JEEP TRAIL
WELL
JEEP TRAIL
FUTURE
RESEARCH LAB. & RESIDENCE QUARTERS
COYOTE CANYON
DEEP CANYON
U.S. WEATHER RECORDER
FUTURE JEEP TRAIL
2000
1200
1600
2000
2400
2800
2200
1400
NORTH
0
1000
2000
DECEMBER 1963

DRAWING NO. 7

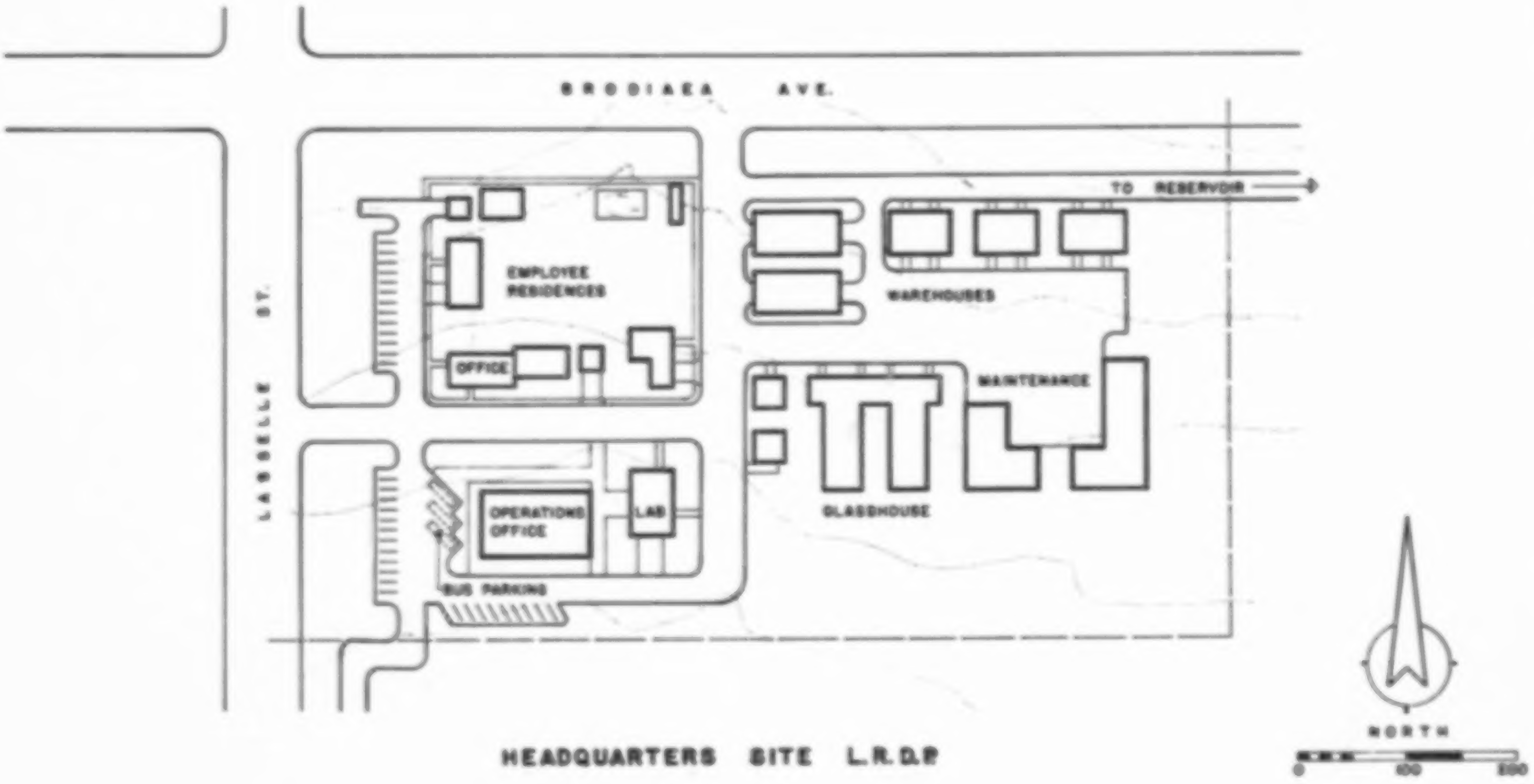
BOYD DESERT RESEARCH CENTER

UCR

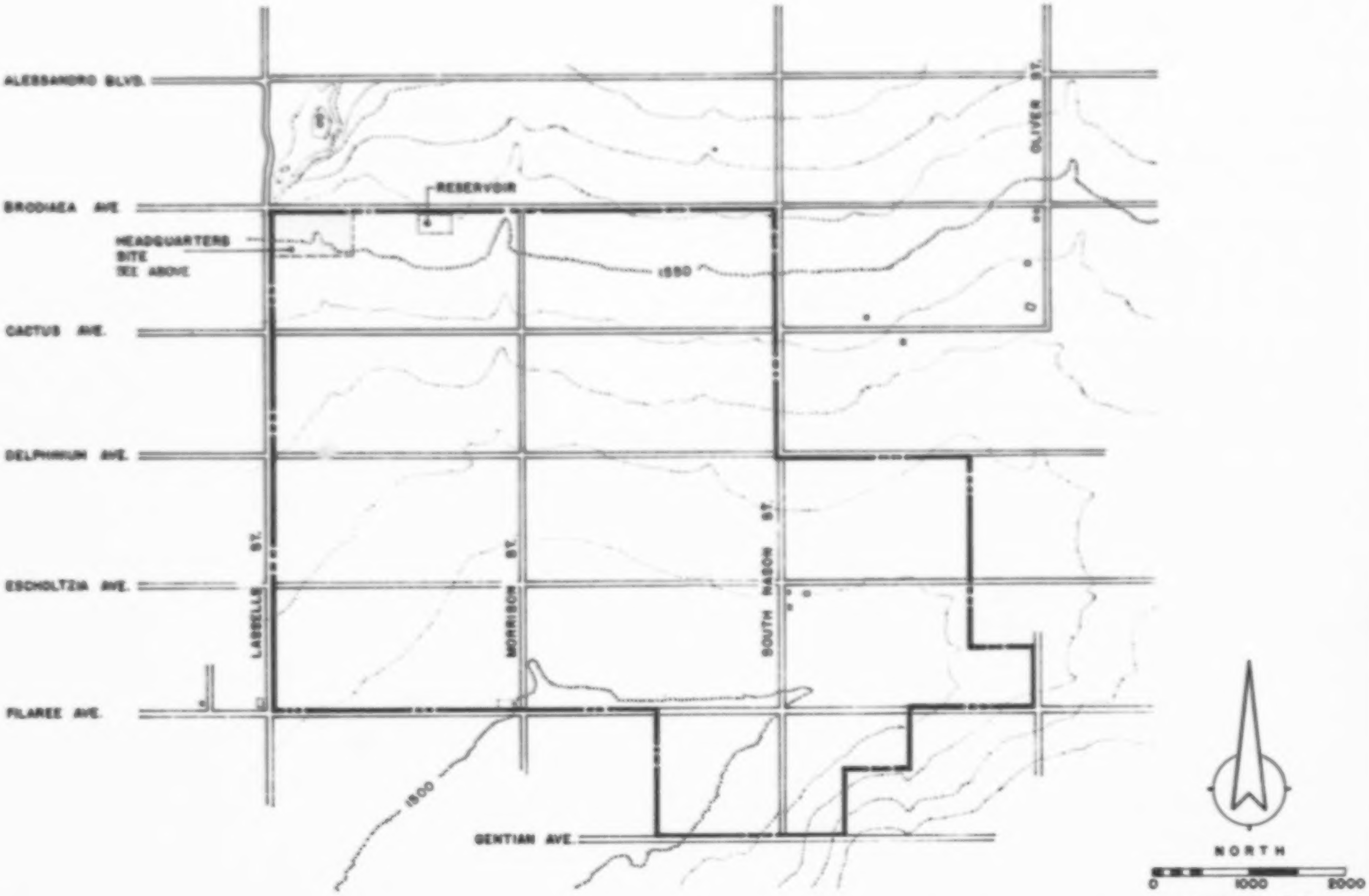
LONG RANGE DEVELOPMENT PLAN

UNIVERSITY OF CALIFORNIA, RIVERSIDE

GEORGE VERNON RUSSELL F.A.I.A. & ASSOCIATES


BRODIAEA AVE.
TO RESERVOIR
LASSELLE ST.
EMPLOYEE RESIDENCES
OFFICE
WAREHOUSES
MAINTENANCE
OPERATIONS OFFICE
LAB
GLASSHOUSE
BUS PARKING
NORTH
0
100
200

HEADQUARTERS SITE L.R.D.P.


ALESSANDRO BLVD.
BRODIAEA AVE.
RESERVOIR
HEADQUARTERS SITE SEE ABOVE
CACTUS AVE.
DELPHINIUM AVE.
ESCHOLTZIA AVE.
FILAREE AVE.
GENTIAN AVE.
LASSELLE ST.
MORRISON ST.
SOUTH MASON ST.
OLIVER ST.
1650
1900
NORTH
0
1000
2000

DECEMBER 1963

DRAWING NO. 8

MORENO RANCH

UCR

LONG RANGE DEVELOPMENT PLAN
UNIVERSITY OF CALIFORNIA, RIVERSIDE
GEORGE VERNON RUSSELL F.A.I.A. & ASSOCIATES

COMPUTER CENTER

The Computer Center was established in the Fall of 1963. Because of its size it could no longer be housed in the Administration Building and was moved to the basement of the Humanities Building in December 1963, where 2,000 ASF was newly developed for that purpose. Ultimate space requirements for the Center amount to approximately 6,500 assignable square feet. Therefore new quarters must be developed. The Long Range Development Plan shows the location of the Computer Center in conjunction with the Mathematics Building. There is some faculty opinion that this facility would be more appropriately located in the Physical Sciences complex. Until this question is resolved, the location of the Center in the Mathematics Building should be regarded as tentative.

DRY LANDS RESEARCH INSTITUTE

A Dry Lands Research Institute was established at UCR by the Board of Regents in November 1963. This will be an interdisciplinary program involving departments in the College of Letters and Science and the CRC-AES. The essential purpose of the Institute will be "to foster a vigorous coordinated, long-term scientific attack, involving collaboration across both international and interdisciplinary boundaries, on understanding the forces which contribute to stable and productive human use of the physical, biotic, and cultural resources of the world's dry lands." The requirements for initial facilities for the Institute are calculated to amount to approximately 17,500 ASF, 29,000 gross square feet, for offices and laboratories and 12,000 ASF, 14,000 gross square feet, for specialized glasshouse, growth chamber and auxiliary facilities. The proposed location for this development is in an area near the Agricultural Extension Buildings.

MORENO RANCH

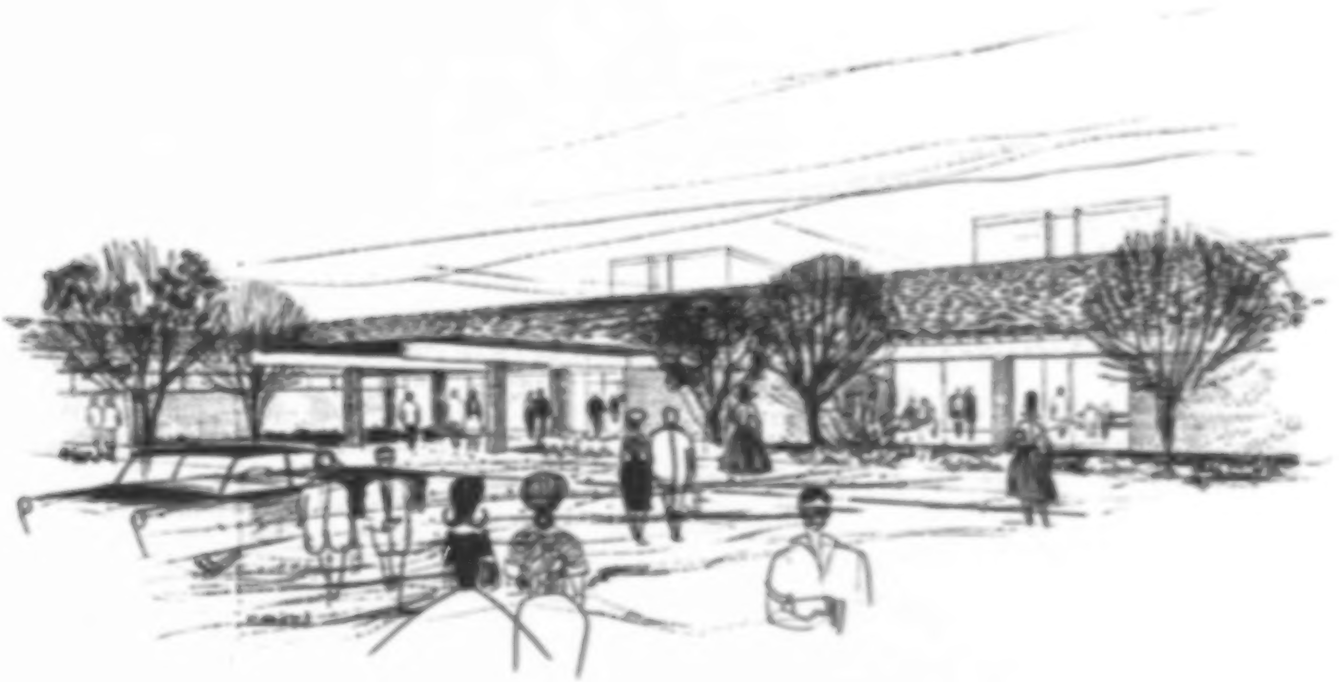
A unit of Agricultural Operations manages the experimental plantings on 550 acres of campus land and the newly acquired 840 acre tract of land, known as the Moreno Ranch, in nearby Moreno Valley. The Moreno Ranch is being used for experimental plantings incident to the expanding programs in Agronomy and Vegetable Crops, and provides an area of sufficient size for any foreseeable development in agricultural field research adapted to the Riverside environment.

New headquarters facilities are scheduled for early construction on the Moreno Ranch property and are delineated on Drawing #8.

FUTURE ORGANIZED RESEARCH UNITS

Other Institutes or Study Centers that might be developed in conformity with the Academic Master Plan include Centers for Applied Statistics, Molecular Biology, Economic Geophysics, International Studies and a Museum of Paleontology. Existing strong programs in these various fields of study and research facilities already provided or in the process of planning should greatly encourage the foundation of these and other affiliated centers.

Lands to the east and south of Experiment Station facilities will provide ideal sites for sizeable installations. Their activities might be related to those of certain divisions of the University, yet a high degree of autonomy could be maintained.



RESIDENCE HALL

STUDENT HOUSING

RESIDENCE HALLS

The first major residence hall (400 men and 400 women) was completed in 1960 and since then a portion of a second facility of the same eventual size has been completed, providing housing for 400 women only. Food is now being prepared in the kitchens of the earlier-constructed residence halls until accommodations are provided in the additional units which will house 400 men. Many operational problems are generated by the lack of kitchen facilities in the new unit.

Superior housing is a major factor in the student's selection of his university. Other campuses of the University of California offer the glamor of major cities, picturesque seashores, or optimum climate conditions, and although the pleasant city of Riverside and its dramatic background hills are in themselves excellent environment, its delights are not as readily accessible as, say, the beaches at the Santa Barbara and San Diego campuses. The sharply-rising surrounding hills suggest that living quarters might offer a change of scale, and that a variety of light quality might be achieved by the use of shaded patios and gardens — so usable during the warm weather that prevails through a portion of the school year.

The student should find in resident halls a warm environment, compatible with personal values, and fellow students in sympathy with his objectives — otherwise dormitories may miss their mark in enriching the academic life of the student. Variety of environment must also be provided by space of different dimensions, atmosphere and purpose for the infinite number of student interests.

By their nature residence halls must be large structures, and large structures create problems generated by the younger student's abrupt change from home to institutional environment. Acknowledgment of the problems and subsequent design solutions which might make transition less violent should be paramount considerations of the executive architect. These should be student homes — not cells.

The location of the residence hall development places most of the buildings within a 10-minute walk from the focus of the Academic Center — the Library. Buildings on the outer periphery of the group are well within 15 minutes of the Center but might present a travel-time problem for those who must return to the halls for lunch. A greater concentration of facilities would tend to create the feeling of being in one truly overwhelming structure.

The topography of nearby ravines offers opportunities for developments that could compare to those on the Berkeley Campus. Space has also been provided for adequate recreational facilities immediately adjacent to housing structures, in addition to those used for more formal physical education programs.

Existing facilities will be periodically augmented by other structures. These will include the aforementioned additions for 400 men to Residence Hall #4.

The advisability of constructing buildings for 800 students on the Riverside Campus is open to question for several reasons, the most important being the campus growth rate during its early stages of development and the problem of immediate full occupancy upon completion of construction. The somewhat overpowering size of such buildings is also debatable unless they become a part of a truly urban scene — a characteristic that UCR has so far been able to avoid due to limited enrollment objectives and ample acreage.

Because of these considerations the pattern of Residence Halls indicated on the 1960 Master Plan has been materially changed by the suggested outline of buildings which would be more adaptable to incremental growth than the more formal and larger units now found on the campus. These, along with married students housing, would house slightly less than a half of the anticipated 10,000 full time enrollment.

The new structures will average 4 stories in height and, because of their smaller size, can attractively utilize sites whose grades might preclude placement of larger buildings. The size and number of dining and main lounge facilities indicated would serve several living units which, in the aggregate, would house 800 students each. This configuration is based on the opinion that smaller kitchen and administrative facilities would be un-economical. Initial food service installations might be larger than necessary for the number of living units incrementally built but the anticipated growth sequence would be rapid enough to justify some initial over-design.

It is recommended that the completion of the informal lounge and kitchen facilities in the Residence Hall Unit 4 proceed according to plan at an early date as its appearance as well as its function is seriously impaired at this time.

	Existing	10,000 Student Campus
Residence Hall Capacity	1,232	3,650

MARRIED STUDENT HOUSING

The acquisition of government housing units — built just prior to World War II — gave UCR an enviable lead among other UC campuses in efforts to provide for the growing number of married students on university campuses. These facilities provide an extension of 55 acres to the northerly limits of the campus. Aside from the inevitability of dilapidation, the many separate structures are profligate in land use and must eventually be replaced by higher density housing.

Relocation of married student housing was discussed during the planning studies but it was felt that the present site seemed suitable for future development devoted to the same purpose. Further removal of the married student from the campus would mean greater separation from the University atmosphere — a problem already existing to some degree because of his civil status. The site selected is somewhat beyond desirable distance from the Academic Center, but it is within fifteen minutes' walking distance from the Library — very convenient by comparison to most campuses. Proximity to shopping areas proposed in the City of Riverside, University Community Study will also offer advantages to on-campus resident married students.

The 1964 revision of the Long Range Development Plan indicates 850 dwelling units for an ultimate enrollment of 10,000 students. New buildings will also be compressed into an area of 25 acres (slightly less than one half of that now occupied) and it is suggested that three-story structures be used with several higher buildings intermingled to reduce land-use density and provide skyline variety.

Requirements in 1970 call for nearly twice as many units (500) as exist in 1964. An increase in the number of units could be effected by a greater use of high-rise structures which should be built at the outset of the replacement and expansion program; otherwise, too many existing buildings would have to be removed to create space for the new facilities. The need for existing housing will continue and, indeed, will increase during the demolition and subsequent construction periods. Any appreciable number of married housing units beyond the prescribed "horizon" development of 850 would generate the need for additional contiguous parking, and although double decked parking structures have not been indicated in the Plan, the need for them in this area might arise if housing density is increased.

Adequate space has been provided for gardens, children's playgrounds, and adult recreation. Parking areas should be small and close to the units they serve. As in single-student residence halls, an informality of building orientation and the avoidance of an institutional atmosphere should be a prime consideration in the execution of this facet of the program.

The possibility that a community of married graduate students might need to be developed on the non-agricultural land of the Moreno Ranch suggests that some of the present buildings might be utilized for housing on that property at some future date.

UTILITIES

Existing or proposed primary utility systems are discussed in the University Community Study prepared by the City of Riverside and our remarks concern only the on-campus systems.

SANITARY SEWER SYSTEM

The University sewerage system was directly connected to the City of Riverside trunk lines even before annexation to the city. Since the 1960 Plan was prepared, an easement through the campus was granted to the city for the installation of a 15-inch line which will serve the University as well as off-campus developments to the east. Its routing will in no way interfere with future building sites and it will materially reduce connection of new buildings.

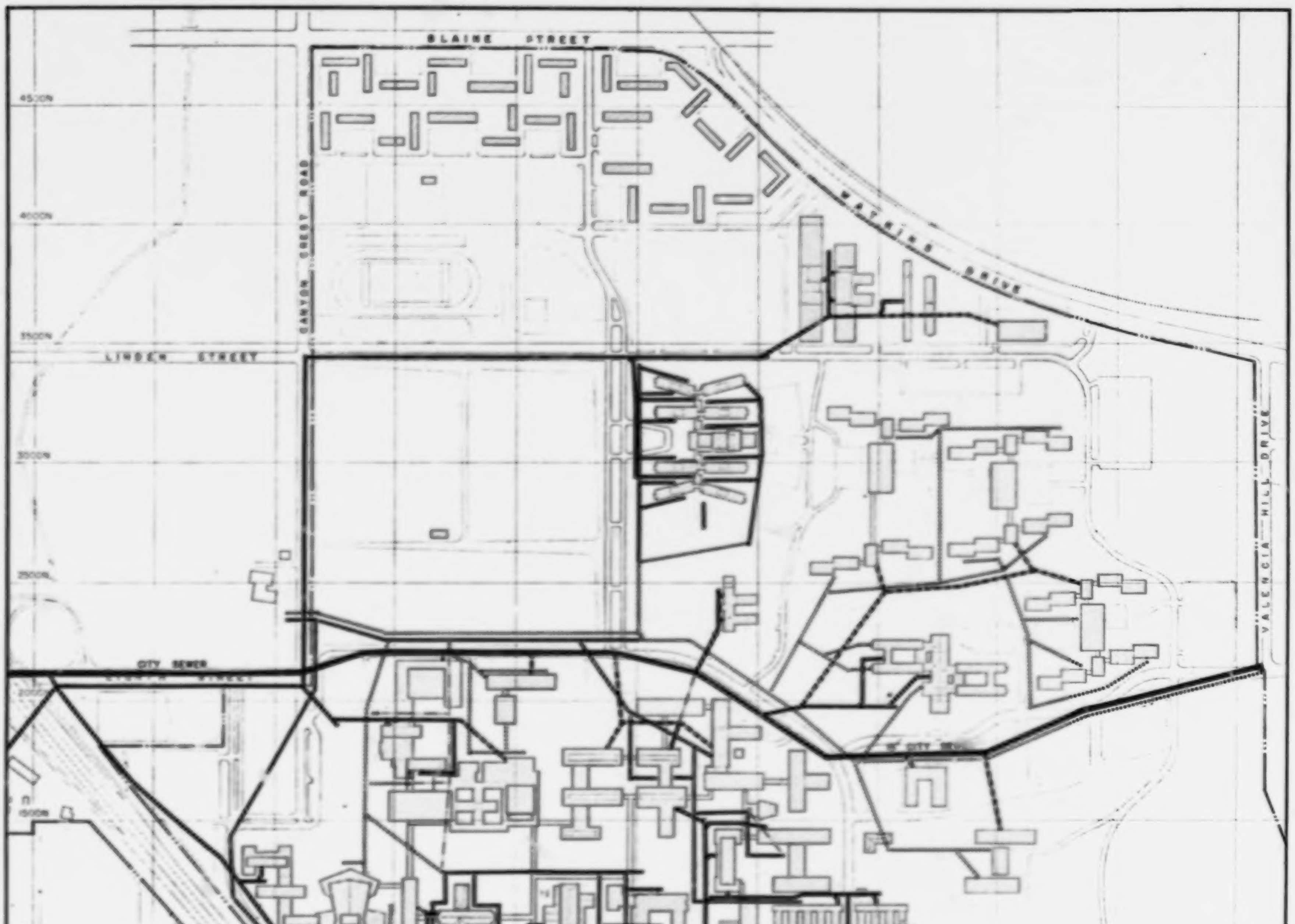
Some campus lines will have to be rerouted from time to time to clear sites for future buildings and other laterals will have to be extended to care for the expansion program. The adequacy of some portions of the campus system is open to question and a detailed study of future requirements based on this Plan should be made in the near future. New structures should, wherever possible, be connected directly to the new City trunk lines, thereby minimizing the possibility of overloading the existing campus system. Gravity flow should be maintained to avoid the use of sewage ejectors wherever possible. (See Drawing #9).

STORM DRAINS

Some possibility of storm damage still exists in areas near ravines, although protective installations are scheduled for early completion. These include a major drain to accommodate flood waters originating in the Box Springs mountains east of the campus; channels converge at the southeast corner of the Athletic Fields. Areas that might be subjected to flooding have been kept free of buildings in the Plan.

At this time negotiations are under way with the State agencies concerned with the Feather River Water Project for the extension of the proposed major storm drain to a point at the eastern edge of the campus. The facility could be used on demand for the drainage of a section of the Feather River transmission pipe line.

It is to be emphasized that the extended development of parking lots, paved areas, housing and commercial districts will add significantly to the storm water run-off and that the need for adequate protection becomes more apparent as the campus and the community develops. (See Drawing #9).

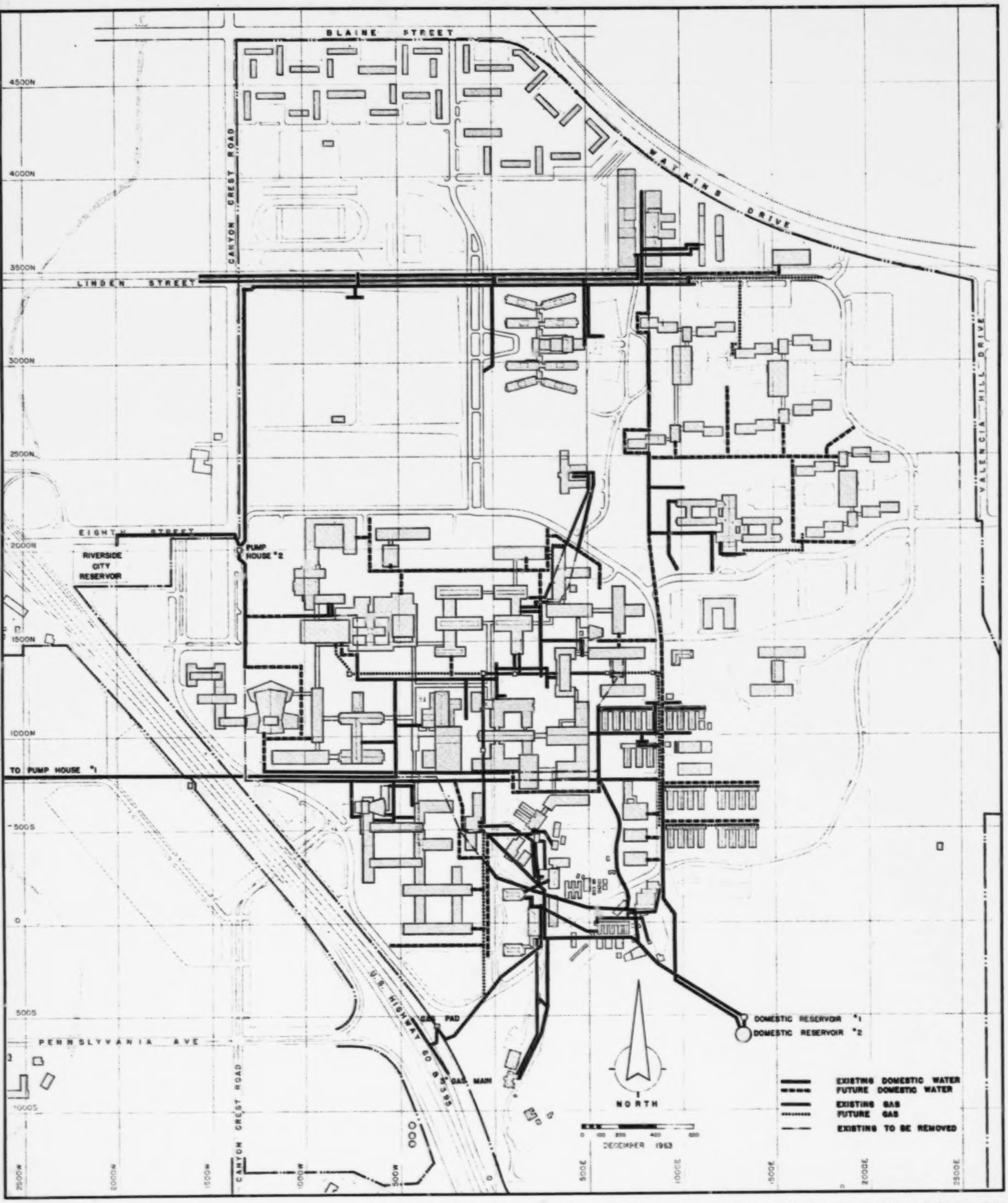

BLAINE STREET
LINDEN STREET
CANYON CREST ROAD
WATKINS DRIVE
VALENCIA HILL DRIVE
CITY SEWER
CITY SEWER
PENNSYLVANIA AVE
U.S. HIGHWAY 60 & 395
4500N
4000N
3500N
3000N
2500N
2000N
1500N
1000N
500S
0
500S
1000S
2500W
2000W
1500W
1000W
500W
500E
1000E
1500E
2000E
2500E
NORTH
DECEMBER 1963
EXISTING SANITARY SEWER
FUTURE SANITARY SEWER
EXISTING UNDERGROUND STORM DRAIN
FUTURE UNDERGROUND STORM DRAIN
EXISTING TO BE REMOVED

DRAWING NO. 9 **UTILITIES PLAN - SANITARY AND STORM SEWERS**

2

UCR

LONG RANGE DEVELOPMENT PLAN
UNIVERSITY OF CALIFORNIA, RIVERSIDE
GEORGE VERNON RUSSELL F.A.I.A. & ASSOCIATES


BLAINE STREET
WATKINS DRIVE
LINDEN STREET
CANYON CREST ROAD
VALENCIA HILL DRIVE
EIGHTH STREET
RIVERSIDE CITY RESERVOIR
PUMP HOUSE "2
TO PUMP HOUSE "1
PENNSLYVANIA AVE
U.S. HIGHWAY 60 & 395
GAS PAD
3" GAS MAIN
DOMESTIC RESERVOIR "1
DOMESTIC RESERVOIR "2
NORTH
EXISTING DOMESTIC WATER
FUTURE DOMESTIC WATER
EXISTING GAS
FUTURE GAS
EXISTING TO BE REMOVED
0
100
200
400
600
DECEMBER 1963
4500N
4000N
3500N
3000N
2500N
2000N
1500N
1000N
500N
0
500S
1000S
2500W
2000W
1500W
1000W
500W
500E
1000E
1500E
2000E
2500E

DRAWING NO. 10

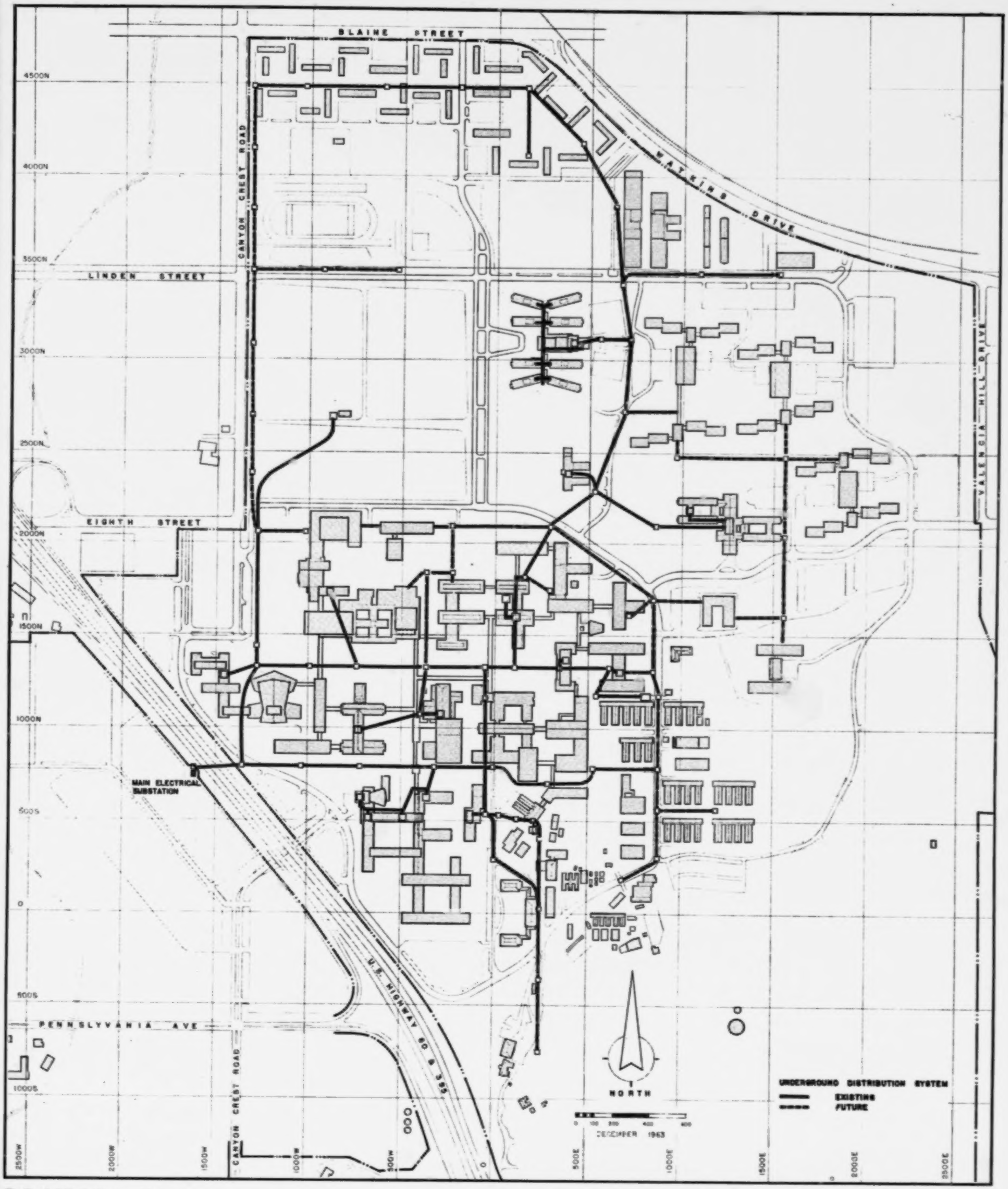
UTILITIES PLAN - WATER AND GAS DISTRIBUTION

UCR

LONG RANGE DEVELOPMENT PLAN

UNIVERSITY OF CALIFORNIA, RIVERSIDE

GEORGE VERNON RUSSELL F.A.I.A. & ASSOCIATES


BLAINE STREET
4500N
4000N
3500N
3000N
2500N
2000N
1500N
1000N
500N
0
500S
1000S
CANYON CREST ROAD
LINDEN STREET
WATKINS DRIVE
VALENCIA HILL DRIVE
EIGHTH STREET
MAIN ELECTRICAL SUBSTATION
PENNSLYVANIA AVE
U.S. HIGHWAY 60 & 395
CANYON CREST ROAD
NORTH
0 100 200 400 600
DECEMBER 1963
UNDERGROUND DISTRIBUTION SYSTEM
EXISTING
FUTURE
2500W
2000W
1500W
1000W
500W
500E
1000E
1500E
2000E
2500E

DRAWING NO. 11

UTILITIES PLAN - ELECTRICAL

UCR

LONG RANGE DEVELOPMENT PLAN

UNIVERSITY OF CALIFORNIA, RIVERSIDE

GEORGE VERNON RUSSELL F.A.I.A. & ASSOCIATES

DOMESTIC WATER

The domestic water supply is adequate to date but certain portions of the system must be re-routed in the future for the accommodation of structures. Furthermore, a new main connecting the north campus to the Academic Center would be highly desirable; this addition would allow sectional shut-down for maintenance with only minimum interruption of service. Future extensions of the system will in any case become necessary due to expansion and the need for more widespread fire protection. A detailed study of future needs based on this Plan would be highly desirable. (See Drawing #10).

IRRIGATION WATER

The future encroachment of parking lots and building complexes on agricultural land will affect the configuration of irrigation distribution systems in the vicinity of the Academic Center and extensive rerouting of pipe lines will become necessary.

DISTILLED WATER

Although several buildings will need supplies of distilled water, it is recommended that local stills be employed in lieu of a central system. This policy is being followed in new laboratories now being designed.

AIR & VACUUM

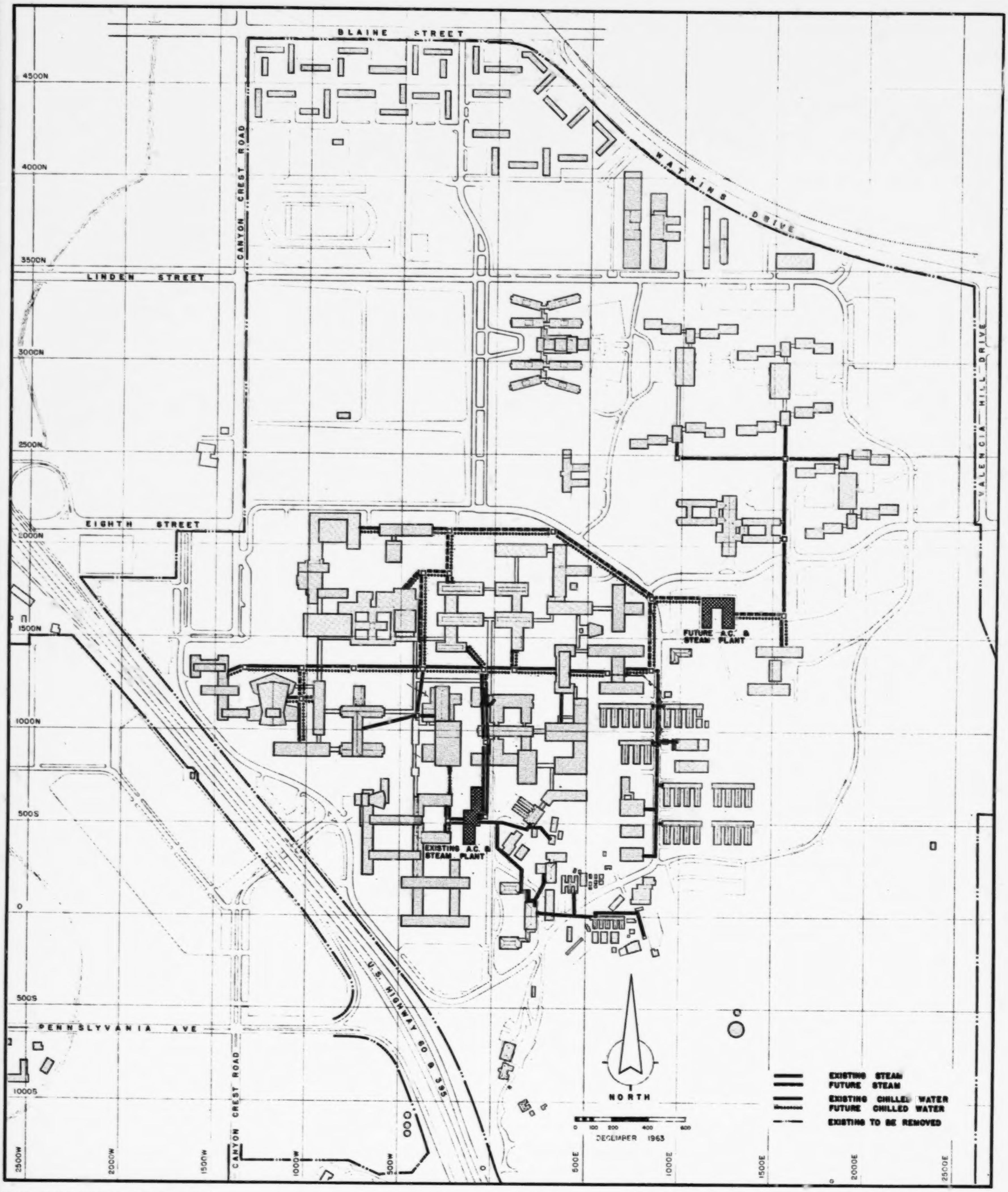
Compressed air and vacuum systems are required in many laboratories and the continuation of the practice of installations of local systems where needed is recommended.

GAS

The demand for fuel gas will be materially affected by the growth of the campus — a case in point being the tentatively proposed new boiler plant which requires a new major line. Contribution to other points of consumption should pose no problems in that main line pressure can be increased and by so doing capacities can be greatly augmented.

ELECTRICAL SYSTEM

The main power switching station is located west of Highway 60 in an area indicated for future parking. Unrestricted extension of the facility is possible and no relocation of the station is contemplated. Underground distribution extends to load centers located at various points on the campus. Primary power is furnished by the City of Riverside at 4,160 V. 3 phase from their 5,250 KVA sub-station to the University station where existing switch gear is already being augmented for the expansion program. The City of Riverside will increase the capacity of the sub-station as needs occur and no problem is anticipated in obtaining adequate power for all future requirements. Future conduit runs will be installed in utility tunnels wherever possible and in underground conduits elsewhere. (See Drawing #11).

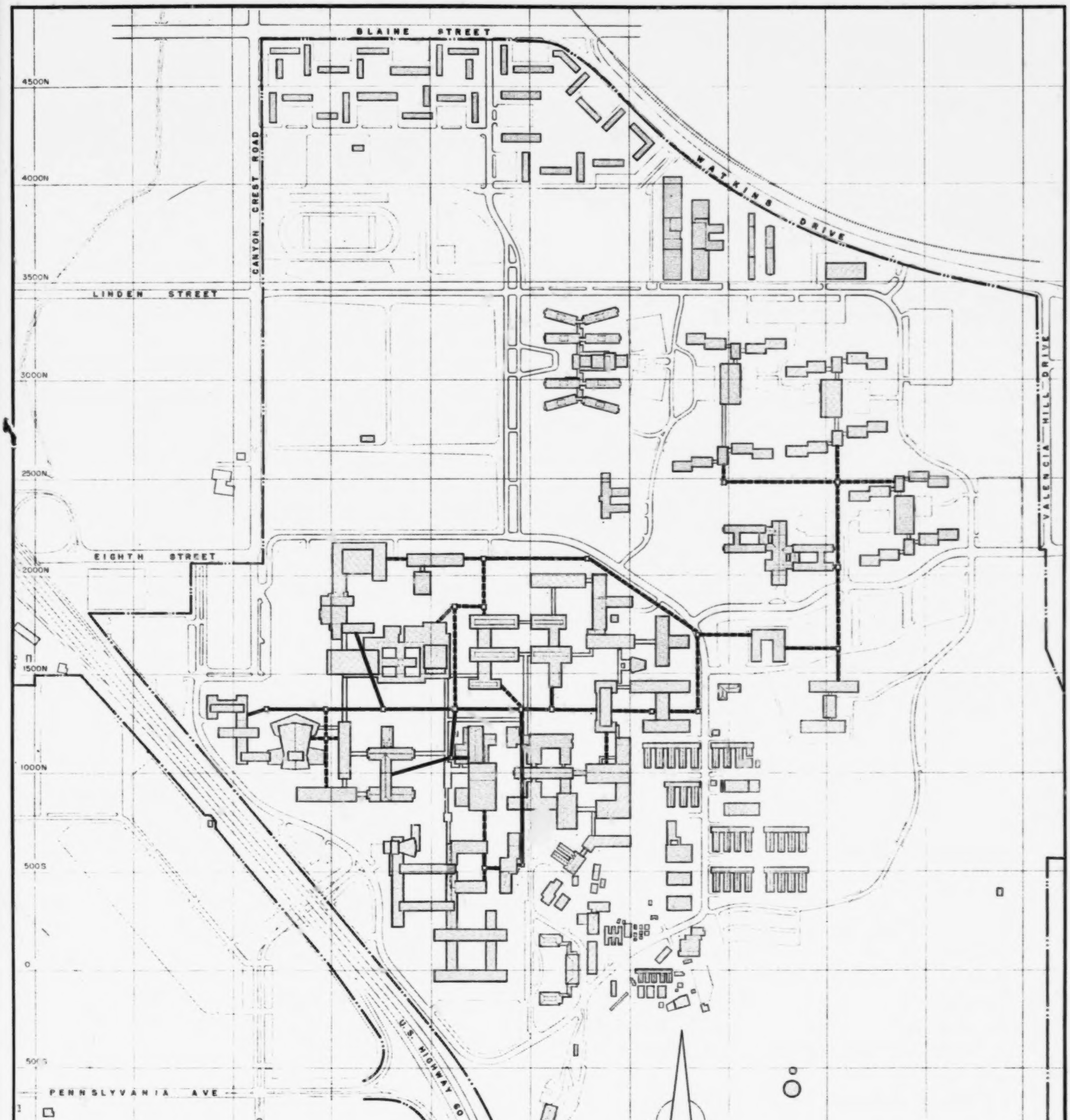

BLAINE STREET
LINDEN STREET
EIGHTH STREET
PENNSLYVANIA AVE
CANYON CREST ROAD
CANYON CREST ROAD
WATKINS DRIVE
VALENCIA HILL DRIVE
U.S. HIGHWAY 60 & 395
4500N
4000N
3500N
3000N
2500N
2000N
1500N
1000N
500S
0
500S
1000S
2500W
2000W
1500W
1000W
500W
500E
1000E
1500E
2000E
2500E
FUTURE A.C. & STEAM PLANT
EXISTING A.C. & STEAM PLANT
NORTH
EXISTING STEAM
FUTURE STEAM
EXISTING CHILLED WATER
FUTURE CHILLED WATER
EXISTING TO BE REMOVED
0 100 200 400 600
DECEMBER 1963

DRAWING NO. 12

UTILITIES PLAN - STEAM AND CHILLED WATER

UCR

LONG RANGE DEVELOPMENT PLAN
UNIVERSITY OF CALIFORNIA, RIVERSIDE
GEORGE VERNON RUSSELL F.A.I.A. & ASSOCIATES


BLAINE STREET
WATKINS DRIVE
CANYON CREST ROAD
LINDEN STREET
VALENCIA HILL DRIVE
EIGHTH STREET
U.S. HIGHWAY 60 & 395
PENNSLYVANIA AVE
CANYON CREST ROAD
4500N
4000N
3500N
3000N
2500N
2000N
1500N
1000N
500S
0
500S
1000S
2500W
2000W
1500W
1000W
500W
500E
1000E
1500E
2000E
2500E
NORTH
0 100 200 400 600
DECEMBER 1963
TUNNEL SYSTEM AND VAULTS
EXISTING
FUTURE

DRAWING NO. 13

UTILITIES PLAN - TUNNEL SYSTEM

UCR

LONG RANGE DEVELOPMENT PLAN
UNIVERSITY OF CALIFORNIA, RIVERSIDE
GEORGE VERNON RUSSELL F.A.I.A. & ASSOCIATES

AIR CONDITIONING

Since the preparation of the 1960 Plan, air conditioning of major facilities has been approved as a basic campus policy. Summer temperatures in Riverside exceed 100° F. and air conditioning has become an expected amenity in developments of all types throughout the region.

The new policy will allow utilization of the facilities not only for the presently scheduled activities but also for year round instruction.

HEATING AND COOLING PLANTS

The 1960 Plan suggested that expansion of the existing boiler plant might supply heating needs for most of the campus. Since then general air conditioning has become a reality and with the building program now in sight, new requirements have already become greatly enlarged. Along with the space problem at the central plant, distribution tunnels are too small to accommodate additional or larger lines necessary for the expansion programs now under way.

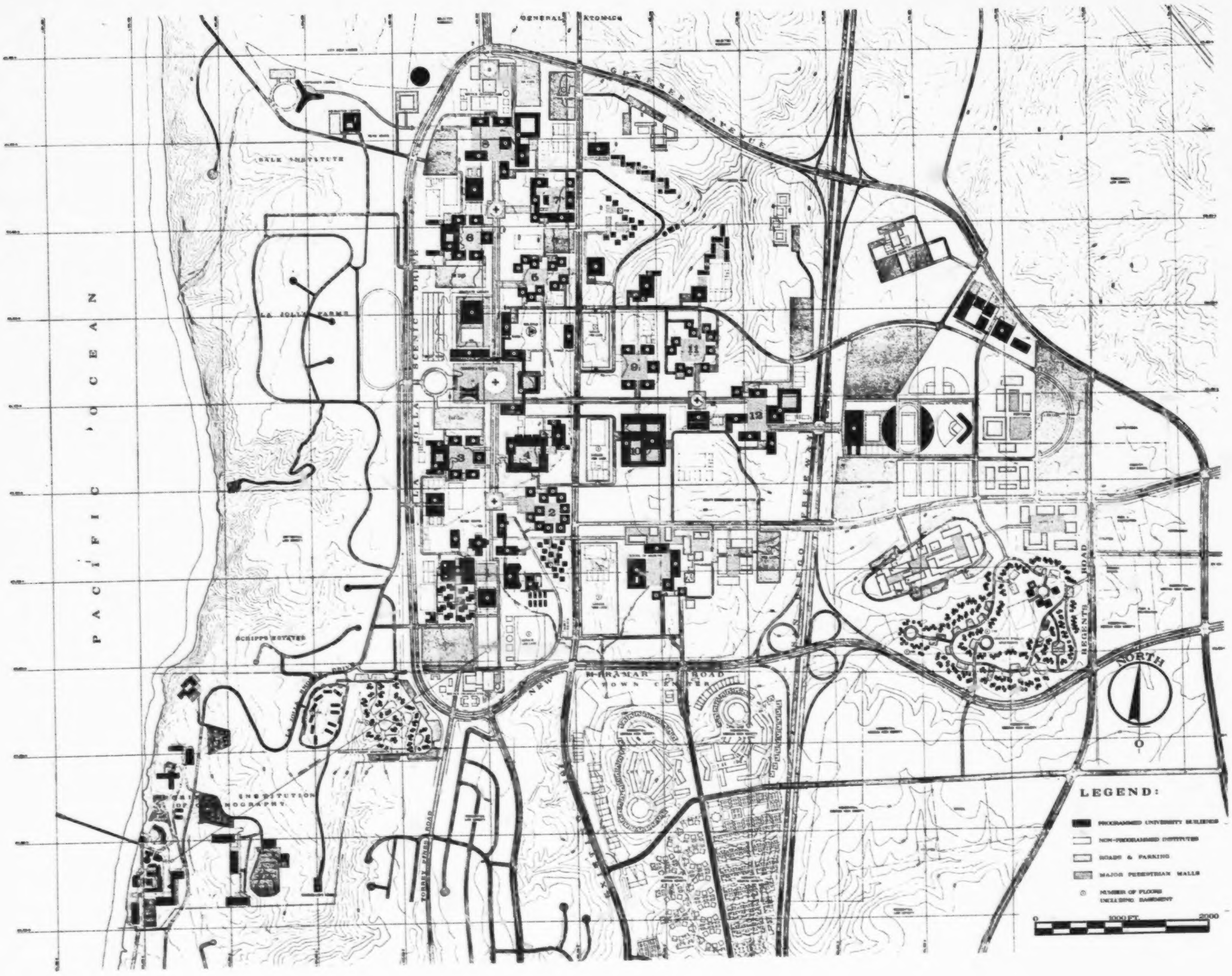
A second combined boiler-air-conditioning plant at a new location should be tentatively considered for the following reasons:

1. Present site limitations for expansion would be alleviated.
2. New distribution tunnels could feed buildings on the north side of the Academic Center and ease the demand on existing facilities. Furthermore the two distribution systems could be joined to form a loop pattern — always an advantage in case of emergency shut-downs.
3. The new plant could provide economical steam and chilled water to future residence hall developments. Existing residence halls have independent systems.

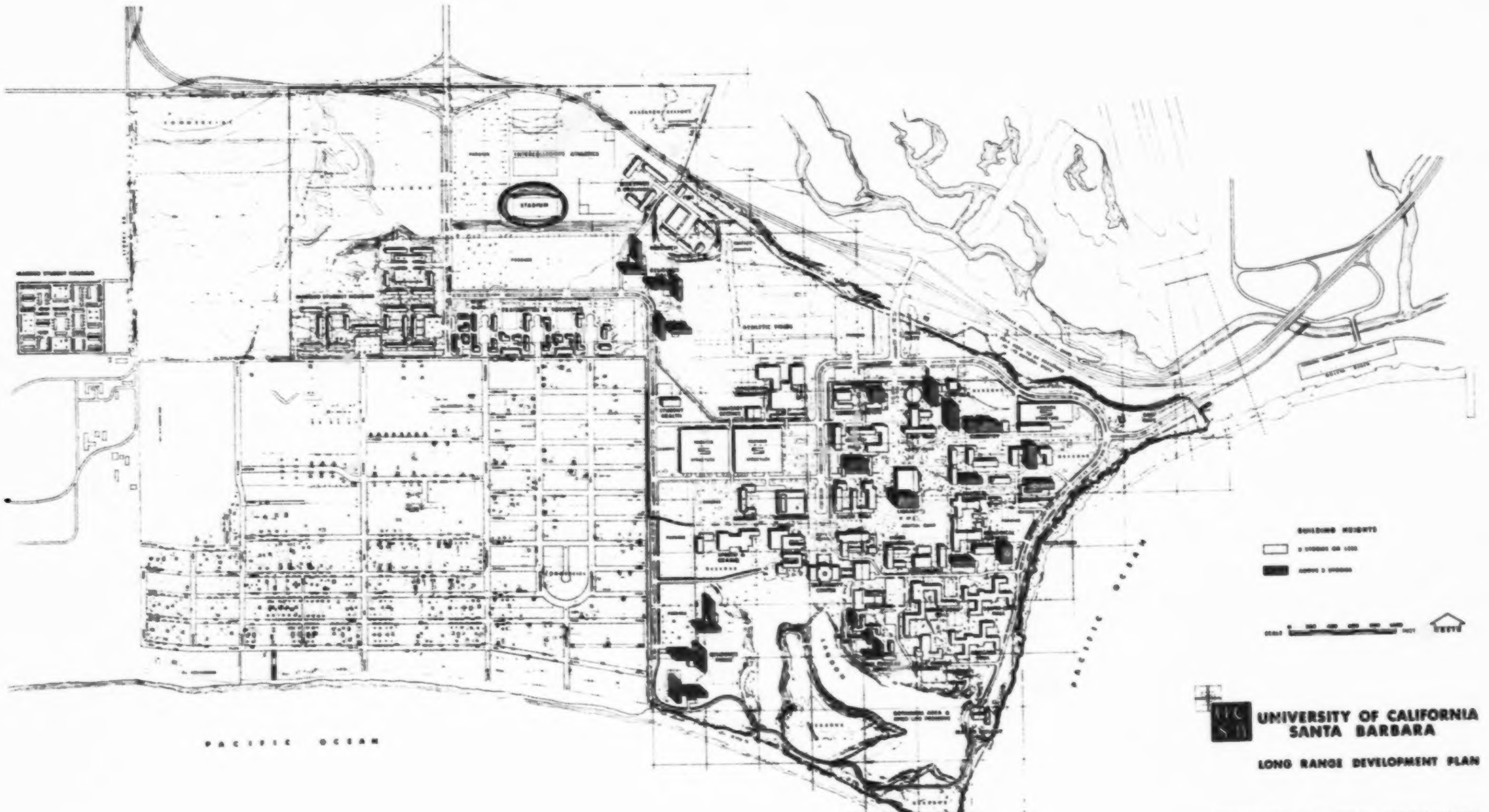
Although a second combined boiler-air-conditioning plant is shown on this Long Range Development Plan, this should be regarded as a tentative decision. A detailed study of enlargement of the existing facility vs establishment of a second one must be made before a final plan can be instituted. (See Drawing #12).

TUNNEL DISTRIBUTION SYSTEM

Existing and proposed tunnels for the distribution of utilities are indicated on Drawing #13.


GENERAL ATOMICS
SALK INSTITUTE
LA JOLLA FARMS
PACIFIC OCEAN
SCRIPPS ESTATES
SCRIPPS INSTITUTION OF OCEANOGRAPHY
MIRAMAR ROAD
TOWN CENTER
REGENTS ROAD
NORTH
LEGEND:
PROGRAMMED UNIVERSITY BUILDINGS
NON-PROGRAMMED INSTITUTES
ROADS & PARKING
MAJOR PEDESTRIAN MALLS
NUMBER OF FLOORS INCLUDING BASEMENT
0
1000 FT.
2000

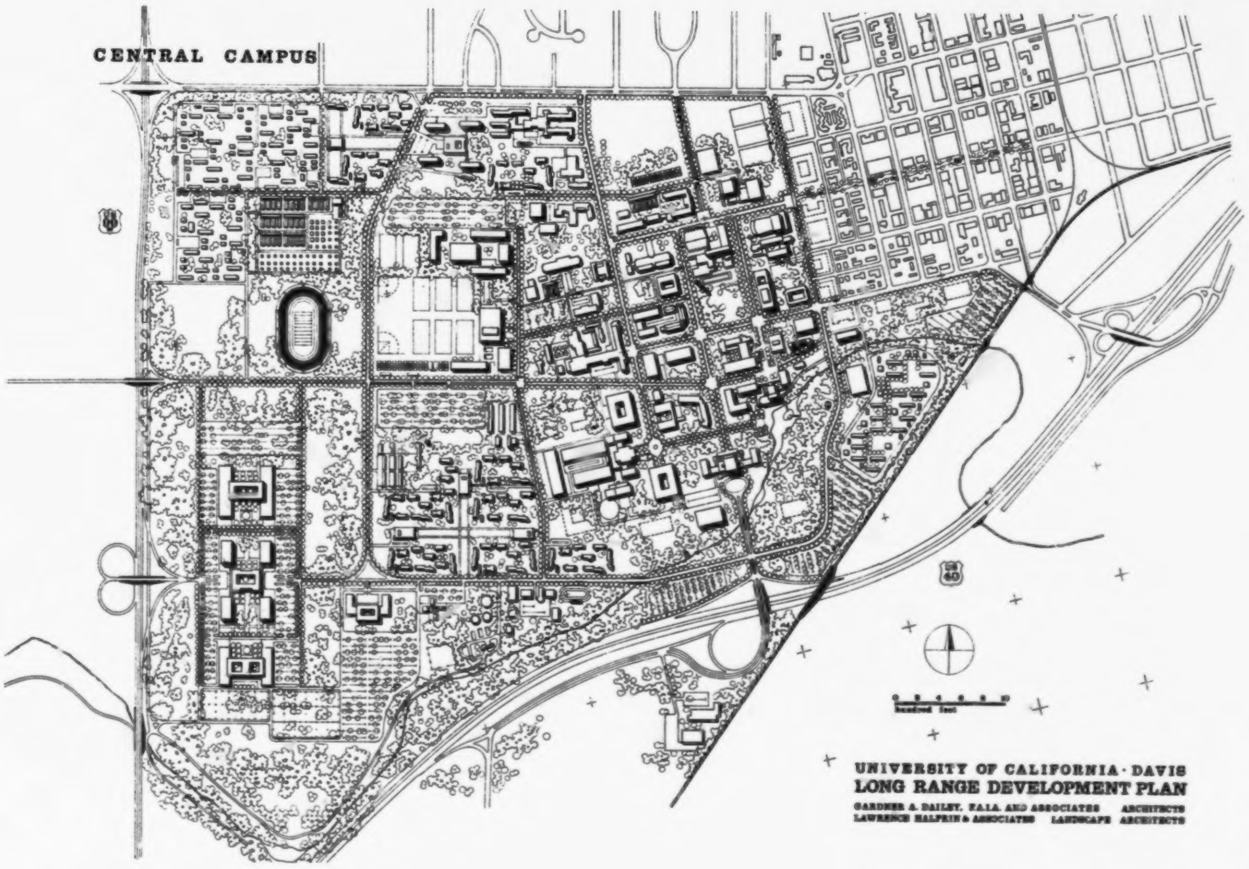
UNIVERSITY OF CALIFORNIA, SAN DIEGO
LONG RANGE DEVELOPMENT PLAN
ROBERT E. ALEXANDER & ASSOCIATES, ARCHITECTS & PLANNING CONSULTANTS · OCTOBER, 1963

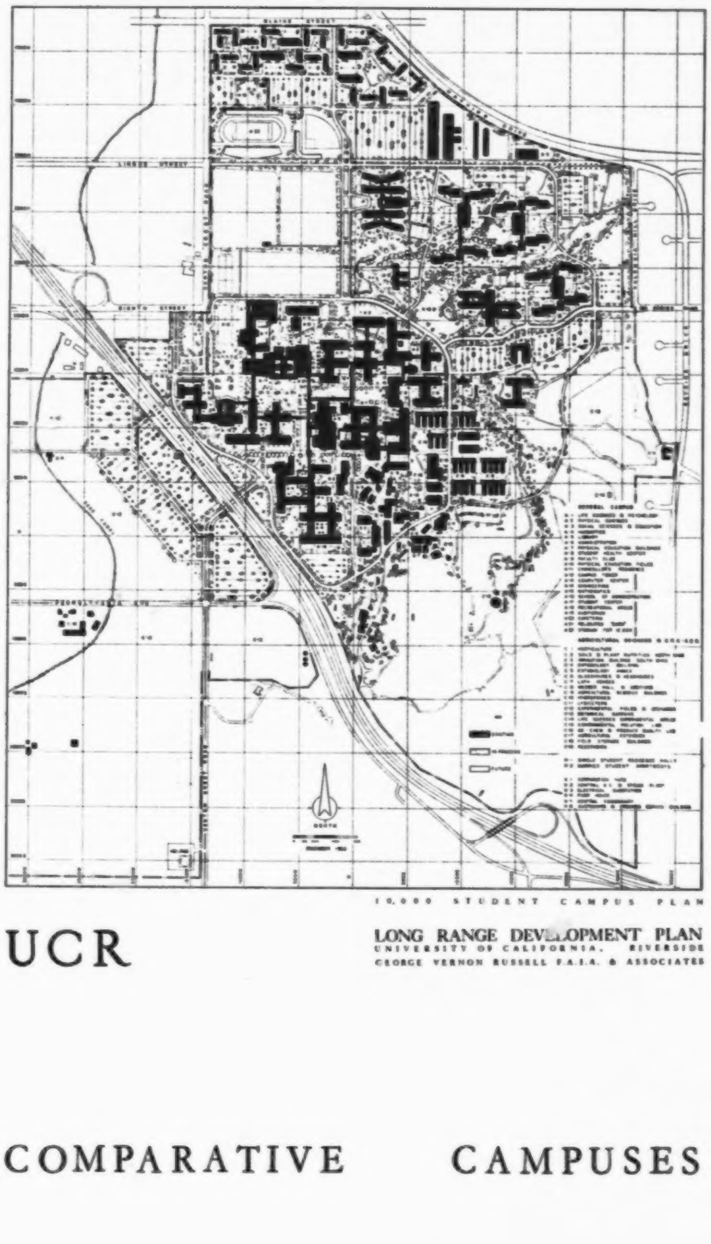

STADIUM
PACIFIC OCEAN
BUILDING HEIGHTS

UNIVERSITY OF CALIFORNIA
SANTA BARBARA

LONG RANGE DEVELOPMENT PLAN

CHARLES LUCKMAN ASSOCIATES
planning · architecture · engineering


CENTRAL CAMPUS
hundred feet
UNIVERSITY OF CALIFORNIA · DAVIS
LONG RANGE DEVELOPMENT PLAN
GARDNER A. DAILEY, F.A.I.A. AND ASSOCIATES ARCHITECTS
LAWRENCE HALPRIN & ASSOCIATES LANDSCAPE ARCHITECTS



10,000 STUDENT CAMPUS PLAN

LONG RANGE DEVELOPMENT PLAN
UNIVERSITY OF CALIFORNIA, RIVERSIDE
GEORGE VERNON RUSSELL F.A.I.A. & ASSOCIATES

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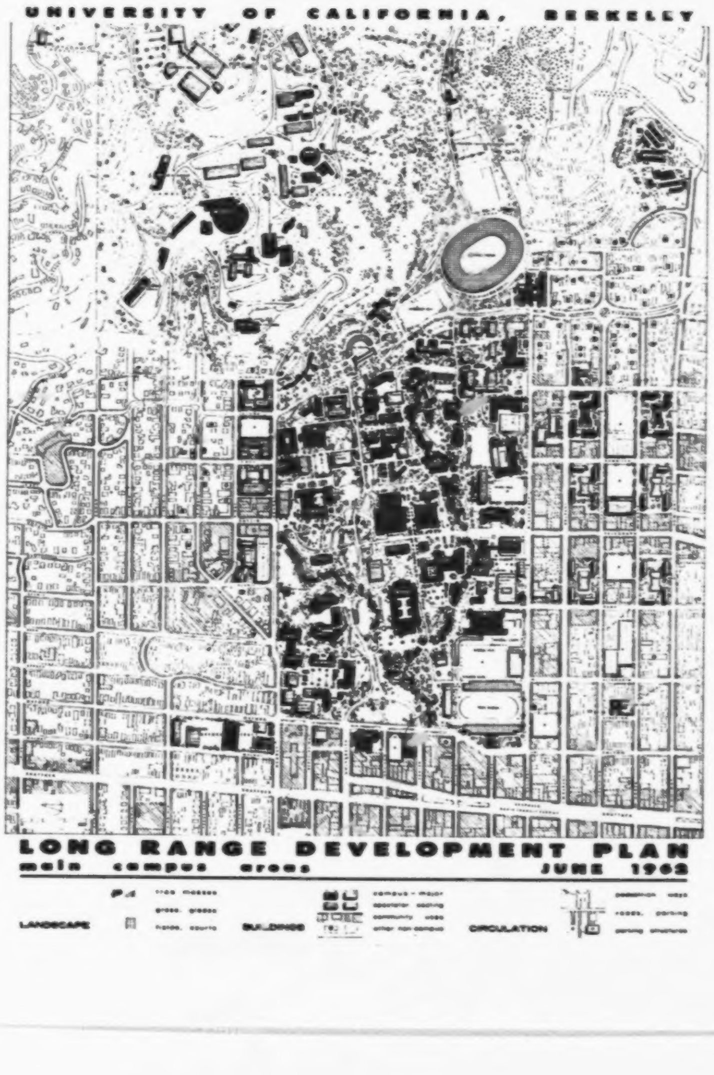

UNIVERSITY OF CALIFORNIA, BERKELEY
LONG RANGE DEVELOPMENT PLAN
main campus areas
JUNE 1962
LANDSCAPE
tree masses
grass, grades
fields, courts
BUILDINGS
campus - major
spectator seating
community uses
other non-campus
CIRCULATION
pedestrian ways
roads, parking
parking structures

COMPARATIVE CAMPUSES

TABLE NO. 1

EXISTING BUILDING AREAS
AND ESTIMATED REQUIREMENTS
Riverside Campus

Building & Subject Field	Existing (1963)		10,000 Students	
	A.S.F.	Gross	A.S.F.	Gross
INSTRUCTION & RESEARCH				
Agricultural Sciences	87,566	146,000	200,000	334,000
Major Buildings *(See Table 2 for break-down)*				
Humanities	53,783	101,020	195,000	320,000
Art	(19,268)	—	(80,000)	(133,000)
Lang., Lit., & History	(14,051)	—	(105,000)	(175,000)
Little Theater	(9,700)	—	(10,000)	(12,000)
Other (Gen. Assignment, Admin., Soc. Sci.)	(10,764)	—	—	—
Life Sciences	30,070	51,540	167,000	277,000
Biological Sciences	(25,170)	—	(130,000)	(215,000)
Psychology (Also occupying 6,429 ASF in P.E. and S.S. Bldgs.)	(870)	—	(37,000)	(62,000)
Other (Gen. Assignment)	(4,030)	—	—	—
Mathematical Sciences	—	—	40,000	67,000
Mathematics (Occupying 4,423 ASF in S.S. Bldg.)			(40,000)	(67,000)
Physical Education	41,048	59,880	86,000	145,000
Physical Education	(32,962)	—	(86,000)	(145,000)
Other (Aux. Enterprises, Psychology)	(8,086)	—	—	—
Physical Sciences	53,582	84,740	290,000	485,000
Physical Sciences	(47,117)	—	(290,000)	(485,000)
Other (Gen. Assignment, Library)	(6,465)	—	—	—

TABLE NO. 1 (continued)

Building & Subject Field	Existing (1963)		10,000 Students	
	A.S.F.	Gross	A.S.F.	Gross
SOCIAL SCIENCES	33,488	58,590	70,000	116,000
Social Sciences	(15,838)	—	(70,000)	(116,000)
Other (Gen. Assignment, Dean, Admin., Math., Psychol.)	(17,650)	—	—	—
PROFESSIONS				
Administration	—	—	30,000	50,000
Education	(4,204 in S.S. Bldg.)		40,000	67,000
Engineering	—	—	75,000	125,000
Sub-totals	299,537	501,770	1,193,000	1,986,000
GENERAL SERVICES & MISCELLANEOUS				
Administration	25,014	41,000	65,000	108,000
Agric., Greenhouses, Fld. Bldg., Shops, Storage, Misc.	116,914	148,000	262,000	330,000
Auditorium	—	—	54,000	90,000
Computer Facility	(1,941 ASF in Hum. Bldg.)		6,500	11,000
Dry Lands Res. Inst.	—	—	29,500	43,000
Health Service	7,229	12,125	30,000	50,000
Library (Incl. Unit 2)	74,295	100,360	165,000	240,000
Misc. Greenhouses & Fld. Bldgs.	9,876	11,600	20,000	25,000
Misc. Storage, Shops & Serv.	54,316	64,000	110,000	138,000
Non-Univ. (USDA)	7,455	12,400	12,000	17,500
Statewide	3,888	6,500	8,000	12,500
Student Center & ASUCR	3,696	6,200	89,000	136,000
Sub-totals	302,683	402,185	851,000	1,201,000
Total	602,220	903,955	2,044,000	3,187,000
Residential (Student)				
Married	(275 units)	192,445	(850 units)	629,000
Single	(1,232 units)	284,000	(3,650 units)	816,000
Sub-totals		476,455		1,445,000
GRAND TOTAL (All Space)		1,380,410		4,632,000

TABLE NO. 2

ESTIMATED AGRICULTURAL SCIENCES CRC & AES SQUARE FOOTAGE REQUIREMENTS

	Existing (1963)		10,000 Students	
Description	A.S.F.	Gross	A.S.F.	Gross
COLLEGE OF AGRICULTURE				
Classrooms	(Included in		2,000	3,000
Departmental	CRC-AES Totals)		110,000	180,000
Greenhouses			82,000	100,000
Sub-total			194,000	283,000
CRC-AES				
Departmental	108,871	181,500	88,000	150,000
Greenhouses	62,705	74,000	120,000	160,000
Sub-total	171,576	255,500	208,000	310,000
COMBINED FIELD BUILDINGS	32,904	38,500	60,000	71,000
Total	204,480	294,000	462,000	664,000

TABLE NO. 3

SUMMARY OF FTE-STUDENT CAPACITIES BY PROJECT TO ENROLLMENT OF 10,000 STUDENTS

(Based on Fall 1963 Instructional Load & Academic Staff & Restudy Standards)

Project	Project Capacity	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
EXISTING CAPACITY:	2708	(2708)	(2708)											
FUNDED THROUGH CONSTRUCTION:														
Physical Sciences Unit 3	320			3028										
Physical Sciences Unit 4	350			3378										
Classroom & Office Unit 1	866				4244									
Agricultural Sciences Building	65				4309									
PLANNED FOR FUNDING 1965-75:														
Life Sciences Unit 2	461					4770								
Library Unit 3	667						5437							
Humanities Unit 2	748						6185							
Mathematics Unit 1	375							6560						
Physical Education Unit 2	150								6710					
Webber Hall Addition	100									6810				
Physical Sciences Unit 5	300									7110				
Entomology Annex Addition	22									7132				
Social Sciences Unit 2	500										7632			
Administration Unit 2	100										7732			
Life Sciences Unit 3	200											7932		
Humanities Unit 3	450											8382		
School of Engineering	350												8732	
Education Building	250												8982	
Physical Sciences Unit 6	350													9332
Agricultural Sciences Unit 2	100													9432
Cumulative Capacity (FTE Students)		2708	2708	3378	4309	4770	6185	6560	6710	7132	7732	8382	8982	9432
Expected FTE Students, by year		2578	3348	4143	5047	5500	6172	6528	6673	7160	7758	8366	8935	9443
Capacity as % of Instructional Load		105%	81%	82%	85%	87%	100%	100%	100%	100%	100%	100%	100%	100%

Prepared June 30, 1964

TABLE NO. 4

PROPOSED CAMPUS LAND USE

EAST OF FREEWAY		Acres
Academic Center of the General Campus (Area of Academic Buildings within perimeter road exclusive of CRC-AES facilities. Buildings occupy about 25% of this area.)		88.00
Single Student Residence Halls (Parking lots and designated recreational areas not included.)		46.50
Married Student Housing (Includes streets and parking but not designated recreational area.)		25.00
Recreational Areas (Includes recreational areas in residential areas.)		28.00
Health Center		2.50
Corporation Yard and Commissary		13.50
Chancellor's Residence		1.77
Athletic Fields and Stadium		49.00
Agricultural Sciences and CRC-AES facilities		50.00
Parking (Does not include parking in Academic Center of CRC-AES area.)		37.00
Mountainous Area		
Life Science Experimental Area	35.00	
Present and Potential Agricultural	61.00	
Undeveloped	100.00	196.00
Sub-total		537.27
WEST OF FREEWAY		
Parking		28.72
Agricultural Land		502.00
TOTAL		1,068.00

TABLE NO. 5

ESTIMATED ATHLETIC AND RECREATIONAL FACILITIES (ACREAGE) FOR ENROLLMENT OF 10,000 STUDENTS

ITEM	No.	Unit Area (Acres)	Total Area (Acres*)
Archery: Men Women	5	0.03	0.20
Basketball (outdoors)	5	0.18	1.00
Volleyball	6	0.13	0.80
Field Hockey (women)	2	1.72	3.40
Tennis	24	0.17	2.40
Bleachers for Tennis	2	0.19	0.40
Swimming Pools	3	0.18	0.50
Baseball	2	5.78	11.60
Softball	0	—	—
Football-Track: (w/bleachers) Track and Field) combined	1	5.78	5.80
Football Practice Fields	2	1.45	2.90
Soccer	2	1.60	3.20
Touch Football	8	1.60	12.80
Handball	6	0.02	0.10
Horseshoes	8	0.01	0.10
TOTAL ACREAGE REQUIRED			45.20
			45 acres

* All Figures rounded to the nearest tenth of an acre.

TABLE NO. 6

ESTIMATED ON-CAMPUS POPULATION

	Existing 1963	10,000 Student Campus
STAFF AND FACULTY		
Academic Staff	438	1,250
Non-Academic Staff	717	1,875
Statewide Agencies (Agricultural Extension, Agricultural Publications, University Extension)	50	150
Non-University Budget	40	225
Staff Total	1,245	3,500
STUDENTS		
Commuting Students	1,469	5,500
Resident Single Students	986	3,650
Resident Married Students	186	850
Student Total	2,641	10,000
TOTAL	3,886	13,500

TABLE NO. 7

ESTIMATED ON-CAMPUS PARKING

	1963 Existing Requirement	10,000 Students
CAMPUS		
Commuting Students (1:2)*	735	2,750
Staff and Faculty (1:1.1)	1,125	3,180
Visitor and Special	45	155
Sub-total	1,905	6,085
RESIDENCES		
Single Student Resd's (1:4)	255	915
Married Student Housing (1:1)	140	850
Sub-total	395	1.765
TOTAL	2,395	7,850

* (1:X) Represents ratio of Parking Spaces to number of people served.

TABLE NO. 8

ESTIMATED ON-CAMPUS INDIVIDUAL UNIT RESIDENTIAL REQUIREMENTS

	Existing (1963)	10,000 Students
SINGLE STUDENT HOUSING		
In Residence Halls*	1,232	3,650
MARRIED STUDENT HOUSING		
Canyon Crest Units	275	to be replaced
Proposed 2 and 3 story buildings		500
Proposed 6 story towers		350
Sub-total	275	850
TOTAL	1,507	4,500

* Single student residence halls — units of 800 students served by 1 dining room and kitchen.

TABLE NO. 9

CHRONOLOGICAL LIST OF CAMPUS BUILDINGS

Year Completed	Structure	Approx. Gross Sq. Ft.	Architect
A. EXISTING			
1916	Horticulture Building	23,562	Hibbard & Cody
1916	Irrigation Building	9,720	Hibbard & Cody
1916	Director's Residence	5,338	Hibbard & Cody
1916	Superintendent's House	1,494	Hibbard & Cody
1916	Barn and Later Additions	4,893	Hibbard & Cody Allison & Rible (Add.)
1931	Soils & Plant Nutrition Building	11,360	G. Stanley Wilson
1931	Insectary Building	4,080	G. Stanley Wilson
1932	Entomology Building	17,345	G. Stanley Wilson
1932-41	Glasshouses and Headhouses 1, 2, 3, 4 and 5	14,188	G. Stanley Wilson
1948	Faculty Club	4,900	Graham Latta
1948	Heating Plants and Shops	6,230	G. Stanley Wilson
1948	Entomology Annex	16,693	G. Stanley Wilson
1950	Temporary Laboratory	2,600	Latta & Denney
1925	Glasshouses and Headhouses No. 6 & 7	9,060	Graham Latta
1953	Library	38,871	Latta & Denney
1953	Physical Sciences Building	38,301	Bennett & Bennett
1953	Physical Education Building	45,830	Arthur Froehlich
1953	Social Sciences Building	58,590	Clark & Frey
1954	Webber Hall	44,510	Chambers & Hubbard
1954	Insecticide Compounding & Storage Building	3,100	Graham Latta
1954	Glasshouse and Headhouse No. 9	5,000	Graham Latta
1955	Headhouse Storage Building	2,760	Office of A & E
1955	Canyon Crest Housing	197,266	
1955	Domestic Water Reservoir	(1,000,000 gals.)	S. B. Barnes
1955	Glasshouses and Headhouses No. 8, 10 and 11	15,000	Latta & Denney

TABLE NO. 9 (continued)

Year Completed	Structure	Approx. Gross Sq. Ft.	Architect
1956	Glasshouse and Headhouse No. 16	5,000	Latta & Denney
1956	Physical Education Bldg. Addition	14,050	Arthur Froehlich
1957	Glasshouses and Headhouses 12, 13, 14 and 2A	17,225	Latta & Denney
1958	Stored Products Insects Building	2,000	Graham Latta
1959	Life Sciences Building	48,884	Pereira & Luckman
1959	Heating Plant Addition	2,904	Graham Latta
1959	Residence Halls 1, 2 and 3	188,000	Allison & Rible
1959	University House	7,000	Dale V. Bragg
1960	Insectary Building Addition	3,890	Bolton C. Moise
1960	Corporation Yard	32,790	Allison & Rible
1960	Farm Group	9,690	Graham Latta
1960	Entomology Building Addition	8,920	Herman O. Ruhnau
1960	Administration Building	41,000	Allison & Rible
1960	Physical Education Utility Bldg.	2,336	Clinton Marr
1961	Physical Sciences Bldg. Addition	46,440	Bennett & Bennett
1961	Boyden Entomological Laboratory	6,544	Graham Latta
1961	Glasshouse and Headhouse 16A	2,525	Graham Latta
1961	Health Service Building	12,125	Herman O. Ruhnau
1963	Humanities Building	101,020	(Matcham & Granger) (George Vernon Russell)
1963	Residence Hall Unit 4	90,957	George Vernon Russell
1963	Purchasing Department Facility	2,589	Dale V. Bragg
1964	Library Unit 2	61,490	George Vernon Russell

B. UNDER CONSTRUCTION (March 1, 1964)

Physical Sciences Unit 3	92,000	Maynard Lyndon
Agricultural Extension	9,800	Clinton Marr

C. IN FIVE-YEAR BUILDING PROGRAM

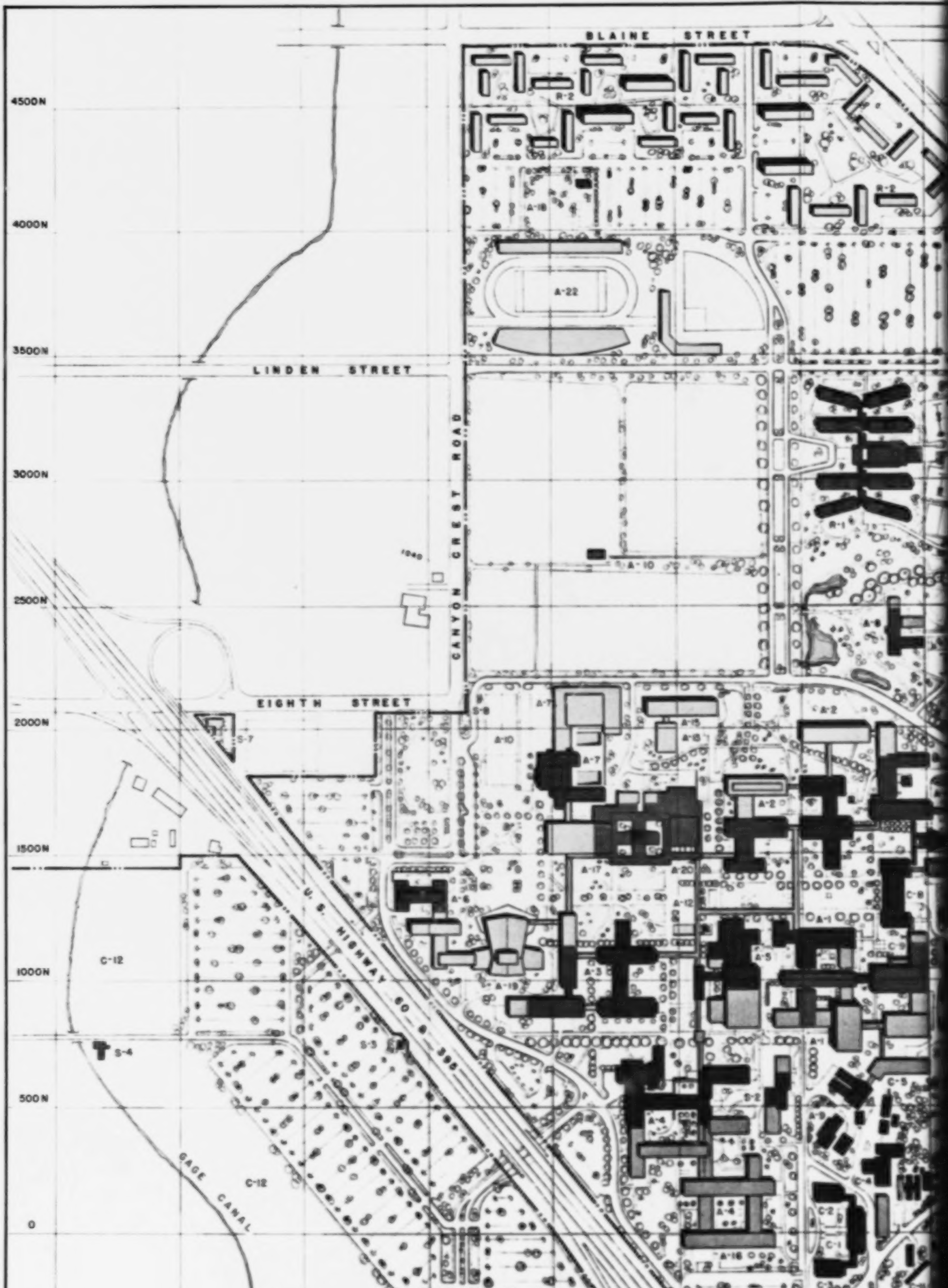
Agrichemical and Produce Quality Lab and Environmental Pollution Lab	18,420	Wilson, Stroh & Wilson
Agricultural Sciences Building	77,625	Ruhnau, Evans, Brown and Steinmann

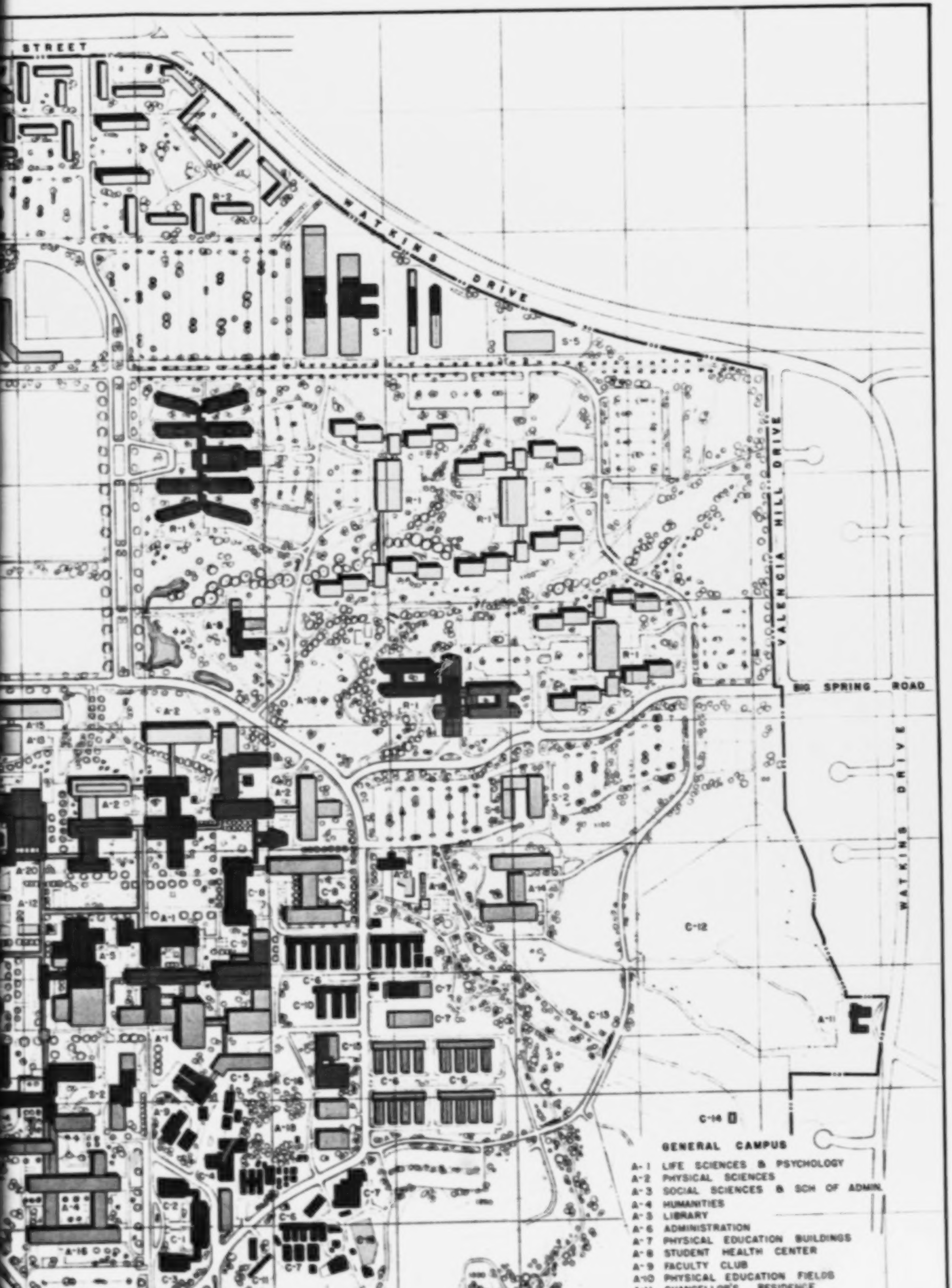
TABLE NO. 9 (continued)

Year Completed	Structure	Approx. Gross Sq. Ft.	Architect
	Cafeteria-Student Center, Step 1	68,000	Killingsworth-Brady & Assoc.
	Physical Sciences Unit 4	78,941	Jones & Emmons
	Life Sciences Unit 2	82,320	George Vernon Russell
	Classroom and Office Unit 1	73,000	Honnold and Rex
	Glasshouses and Headhouses No. 18 and 19	10,000	Graham Latta
	Agricultural Engineering Shops	4,300	Clinton Marr
	Corporation Yard, Step 2	8,600	Dale V. Bragg
	Central Heating and Refrigeration Plant, Unit 2	5,800	
	Administration Unit 2	32,000	
	Humanities Unit 2	72,000	George Vernon Russell
	Physical Education Unit 2	43,000	
	Dryland Research Facility Unit 1	43,000	
	Glasshouse and Headhouse No. 15	5,000	
	Residence Hall Unit 5	88,500	George Vernon Russell
	Glasshouses and Headhouses Nos. 21 through 24	20,000	
	Webber Hall Addition	54,000	
	Library Unit 3	123,000	George Vernon Russell
	Corporation Yard Unit 3	28,350	
	Social Sciences Unit 2	62,500	
	Glasshouse and Headhouse 1A and 3A	7,600	
	Health Service Unit 2	5,200	
	Mathematics Unit 1 (Including Computing Cen.)	48,300	
	School of Engineering Unit 1	125,000	
	Physical Sciences, Unit 5	78,000	
	Life Sciences, Unit 3	50,000	
	Glasshouse and Headhouse No. 25	5,000	
	Entomology Annex Addition	25,700	
	School of Administration	50,000	
	Residence Hall Unit 6	100,000	
	Commissary	18,600	
	Boiler Addition No. 5	—	
	Farm Buildings and Storage	5,400	
	Cafeteria-Student Center Unit 2	68,000	
	Physical Sciences Unit 6	84,000	
	Air Pollution Research Center	40,000	

TABLE NO. 9 (continued)

Year Completed	Structure	Approx. Gross Sq. Ft.	Architect
D. BEYOND FIVE-YEAR BUILDING PROGRAM			
	Education	67,000	
	Agricultural Sciences Unit 2	35,000	
	Residential Apartments, Group 1	150,000	
	Glasshouses and Headhouses Nos. 26, 27, 28	15,000	
	Pedestrian Circulation Structures	—	
	Physical Education Unit 3	25,000	
	Environmental Control Laboratory	8,300	
	Cobalt-Irradiation Facility	—	
	Astronomical Observation Facility	—	
	Library Unit 4	—	


BLAINE STREET
LINDEN STREET
CANYON CREST ROAD
EIGHTH STREET
U. S. HIGHWAY 60 & 395
GAGE CANAL
4500N
4000N
3500N
3000N
2500N
2000N
1500N
1000N
500N
0
R-2
R-2
A-18
A-22
R-1
A-10
A-10
1040
A-8
A-2
A-2
A-7
A-7
A-15
A-13
S-8
S-7
A-6
A-17
A-20
A-12
A-1
A-5
A-3
A-19
C-8
C-9
C-12
C-12
S-4
S-3
A-11
A-4
S-2
C-5
A-9
A-4
C-2
C-1
C-3
A-16


STREET
WATKINS DRIVE
VALENCIA HILL DRIVE
BIG SPRING ROAD
WATKINS DRIVE
R-1
R-2
S-1
S-2
S-5
A-1
A-2
A-3
A-4
A-8
A-9
A-10
A-11
A-12
A-14
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A-16
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A-20
A-21
C-1
C-2
C-3
C-4
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C-6
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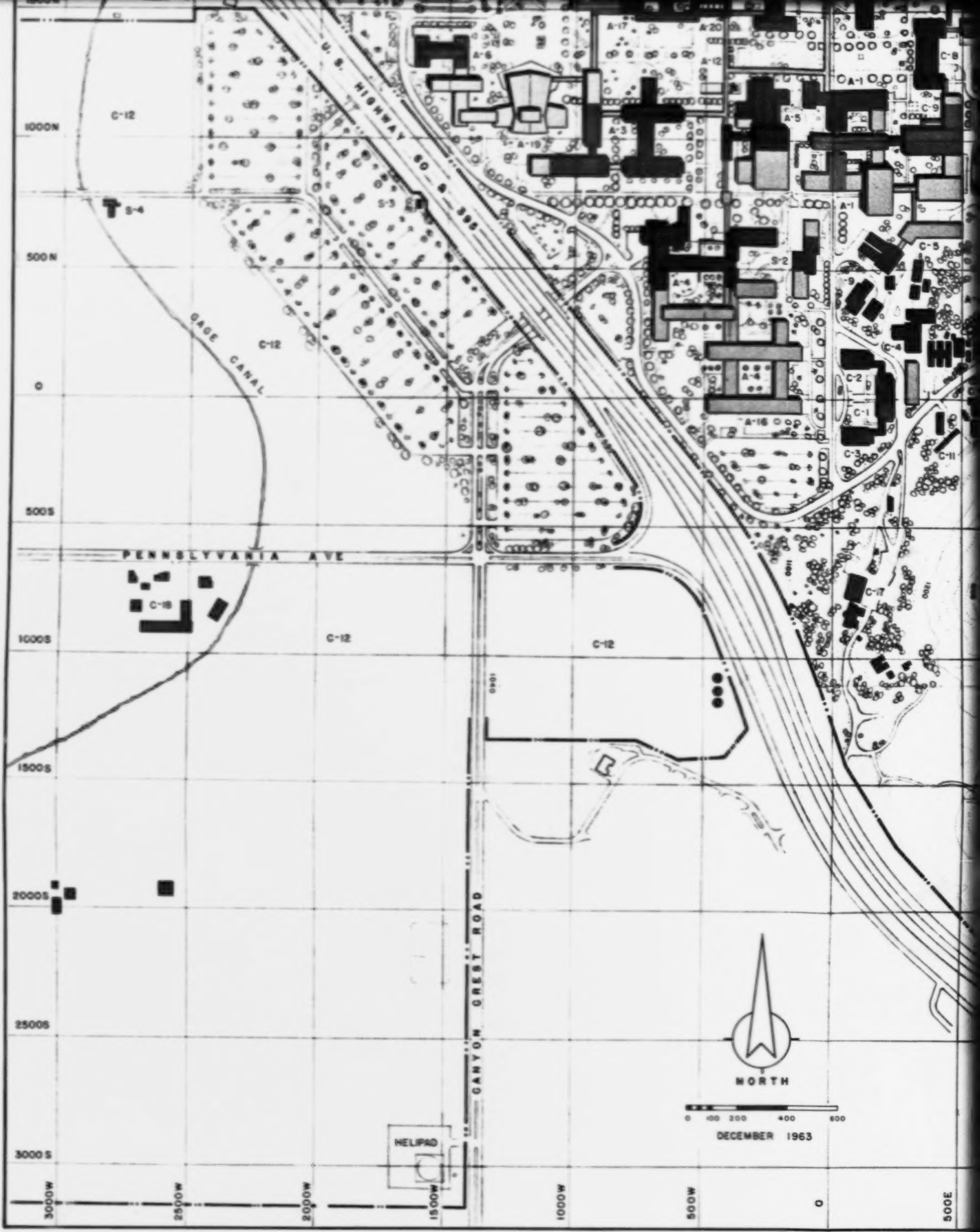
C-8
C-9
C-10
C-11
C-12
C-13
C-14
C-15
C-16
GENERAL CAMPUS
A-1 LIFE SCIENCES & PSYCHOLOGY
A-2 PHYSICAL SCIENCES
A-3 SOCIAL SCIENCES & SCH OF ADMIN.
A-4 HUMANITIES
A-5 LIBRARY
A-6 ADMINISTRATION
A-7 PHYSICAL EDUCATION BUILDINGS
A-8 STUDENT HEALTH CENTER
A-9 FACULTY CLUB
A-10 PHYSICAL EDUCATION FIELDS
A-11 CHANCELLOR'S RESIDENCE
A-12 CAMPUS TOWER
A-13 COMPUTER CENTER



U. S. HIGHWAY 60 & 395
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S-3
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GAGE CANAL
PENNSYLVANIA AVE
C-18
CANYON CREST ROAD
HELIPAD
A-17
A-20
A-6
A-12
A-1
C-8
C-9
A-3
A-19
A-5
C-5
S-2
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C-4
C-2
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C-3
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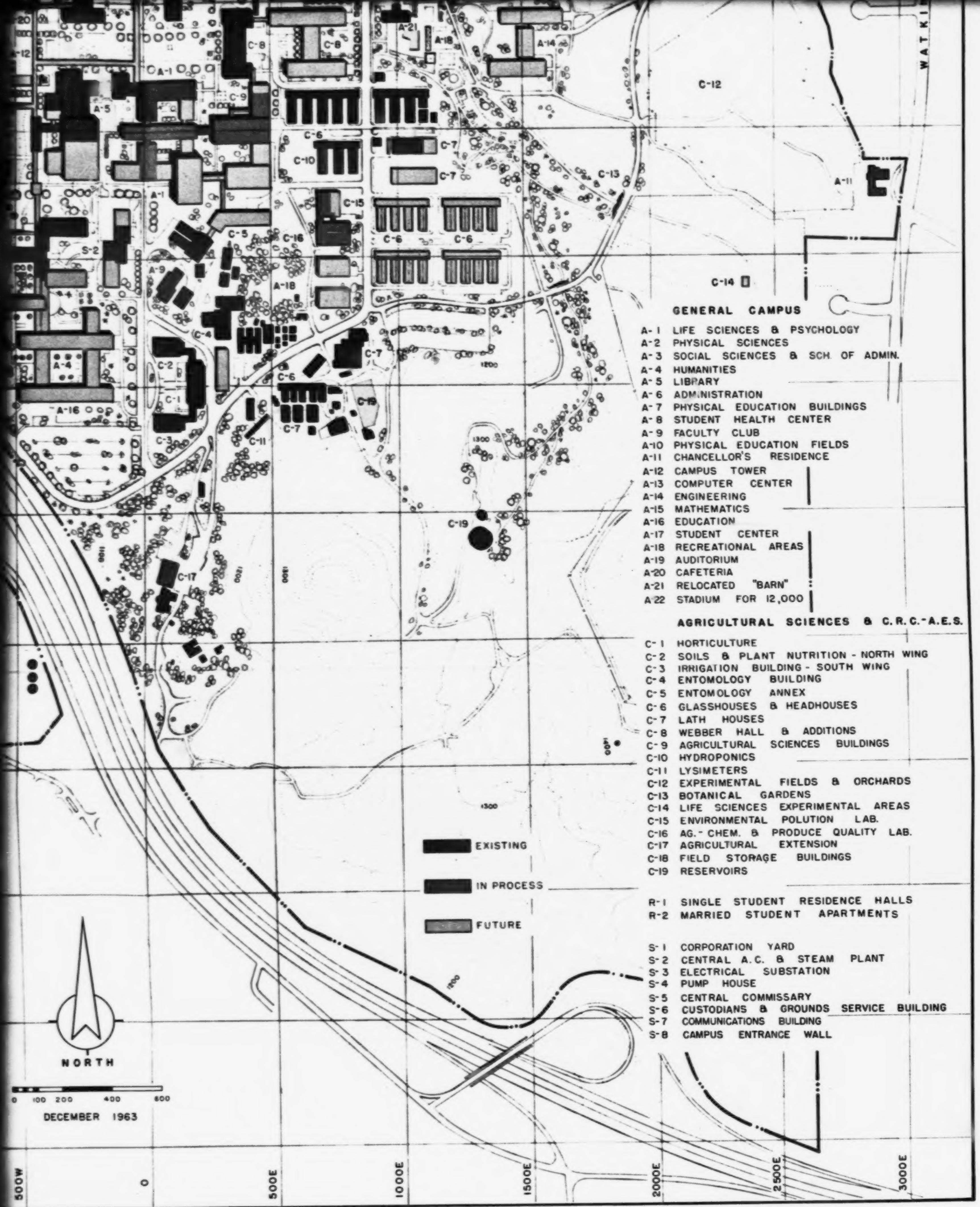
WATKI
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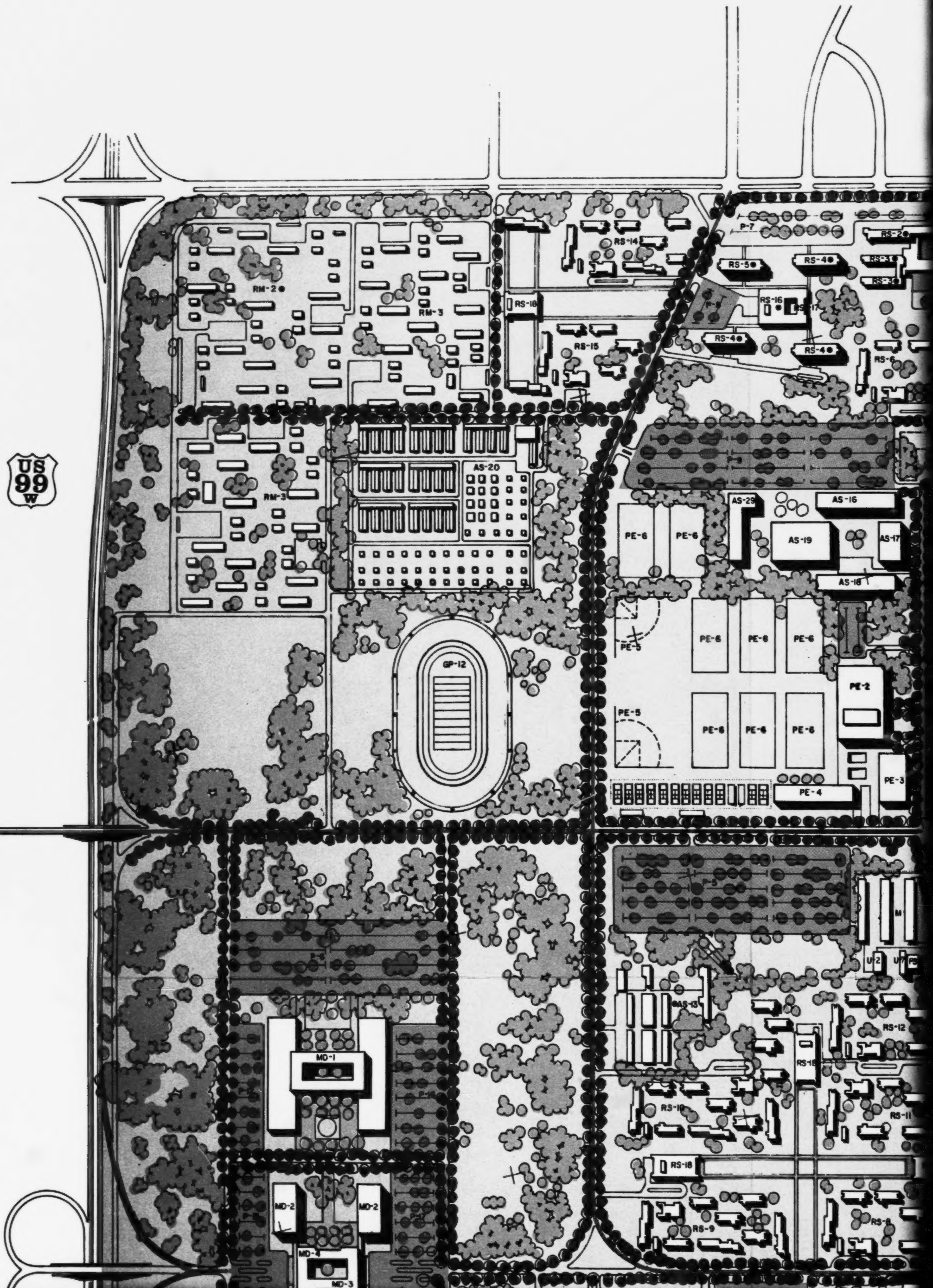
A-22
GENERAL CAMPUS
A-1 LIFE SCIENCES & PSYCHOLOGY
A-2 PHYSICAL SCIENCES
A-3 SOCIAL SCIENCES & SCH. OF ADMIN.
A-4 HUMANITIES
A-5 LIBRARY
A-6 ADMINISTRATION
A-7 PHYSICAL EDUCATION BUILDINGS
A-8 STUDENT HEALTH CENTER
A-9 FACULTY CLUB
A-10 PHYSICAL EDUCATION FIELDS
A-11 CHANCELLOR'S RESIDENCE
A-12 CAMPUS TOWER
A-13 COMPUTER CENTER
A-14 ENGINEERING
A-15 MATHEMATICS
A-16 EDUCATION
A-17 STUDENT CENTER
A-18 RECREATIONAL AREAS
A-19 AUDITORIUM
A-20 CAFETERIA
A-21 RELOCATED "BARN"
A-22 STADIUM FOR 12,000
AGRICULTURAL SCIENCES & C.R.C.-A.E.S.
C-1 HORTICULTURE
C-2 SOILS & PLANT NUTRITION - NORTH WING
C-3 IRRIGATION BUILDING - SOUTH WING
C-4 ENTOMOLOGY BUILDING
C-5 ENTOMOLOGY ANNEX
C-6 GLASSHOUSES & HEADHOUSES
C-7 LATH HOUSES
C-8 WEBBER HALL & ADDITIONS
C-9 AGRICULTURAL SCIENCES BUILDINGS
C-10 HYDROPONICS
C-11 LYSIMETERS
C-12 EXPERIMENTAL FIELDS & ORCHARDS
C-13 BOTANICAL GARDENS
C-14 LIFE SCIENCES EXPERIMENTAL AREAS
C-15 ENVIRONMENTAL POLUTION LAB.
C-16 AG.-CHEM. & PRODUCE QUALITY LAB.
C-17 AGRICULTURAL EXTENSION
C-18 FIELD STORAGE BUILDINGS
C-19 RESERVOIRS
R-1 SINGLE STUDENT RESIDENCE HALLS
R-2 MARRIED STUDENT APARTMENTS
S-1 CORPORATION YARD
S-2 CENTRAL A.C. & STEAM PLANT
S-3 ELECTRICAL SUBSTATION
S-4 PUMP HOUSE
S-5 CENTRAL COMMISSARY
S-6 CUSTODIANS & GROUNDS SERVICE BUILDING
S-7 COMMUNICATIONS BUILDING
S-8 CAMPUS ENTRANCE WALL
EXISTING
IN PROCESS
FUTURE
NORTH
0 100 200 400 600
DECEMBER 1963
500W
0
500E
1000E
1500E
2000E
2500E
3000E

10,000 STUDENT CAMPUS PLAN

LONG RANGE DEVELOPMENT PLAN

UNIVERSITY OF CALIFORNIA, RIVERSIDE

GEORGE VERNON RUSSELL F.A.I.A. & ASSOCIATES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P-8
RS-4
RS-4
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P-9
AS-20
AS-29
AS-16
AS-19
AS-17
AS-18
PE-6
PE-6
PE-5
PE-6
PE-6
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PE-2
PE-5
PE-6
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PE-6
PE-3
PE-4
GP-12
P-5
M
U-2
U-7
AS-13
RS-12
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MD-1
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MD-2
MD-4
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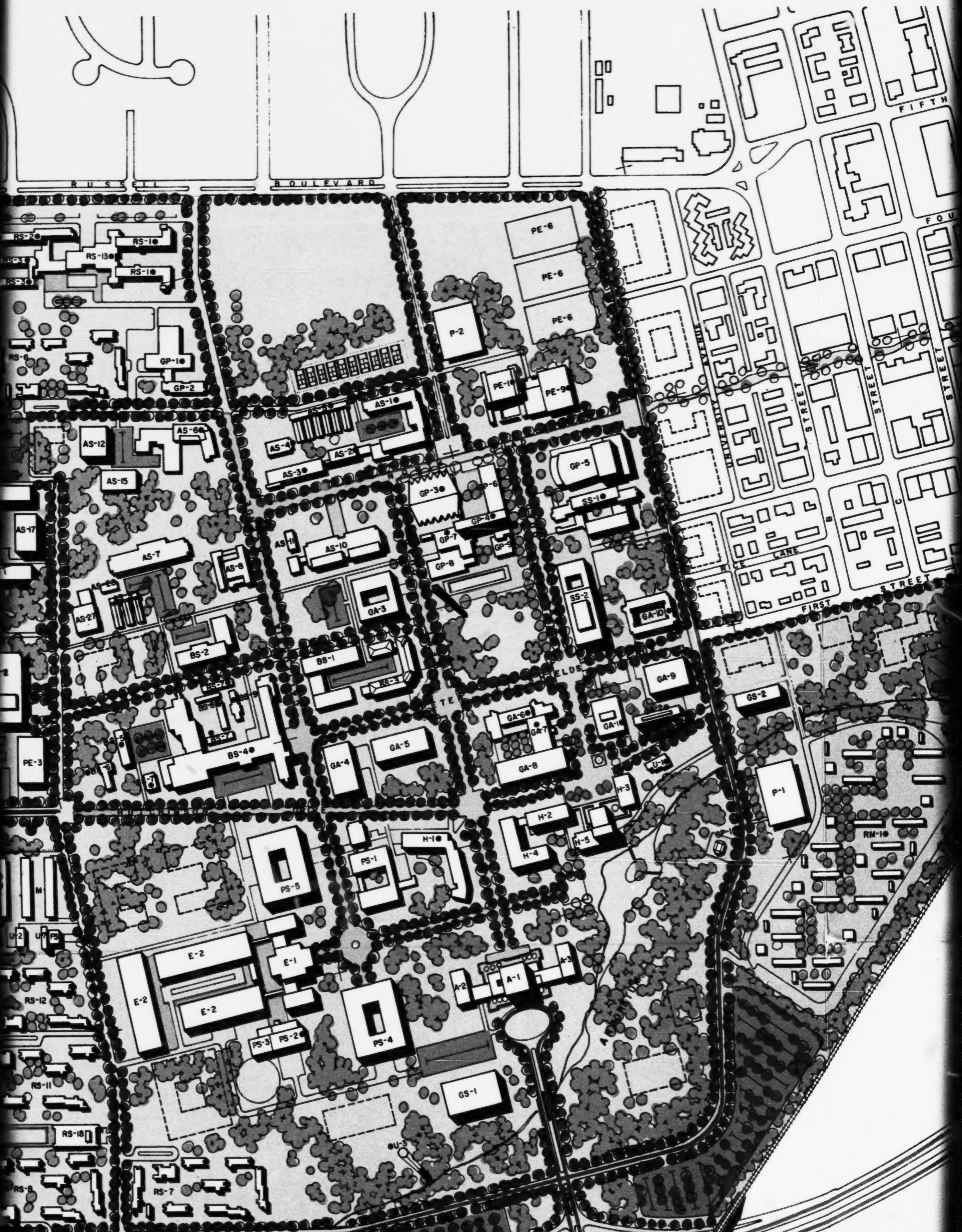
RUSSELL BOULEVARD
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FOU
UNIVERSITY AVENUE
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STREET
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B
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RICE LANE
FIRST STREET
FIELDS
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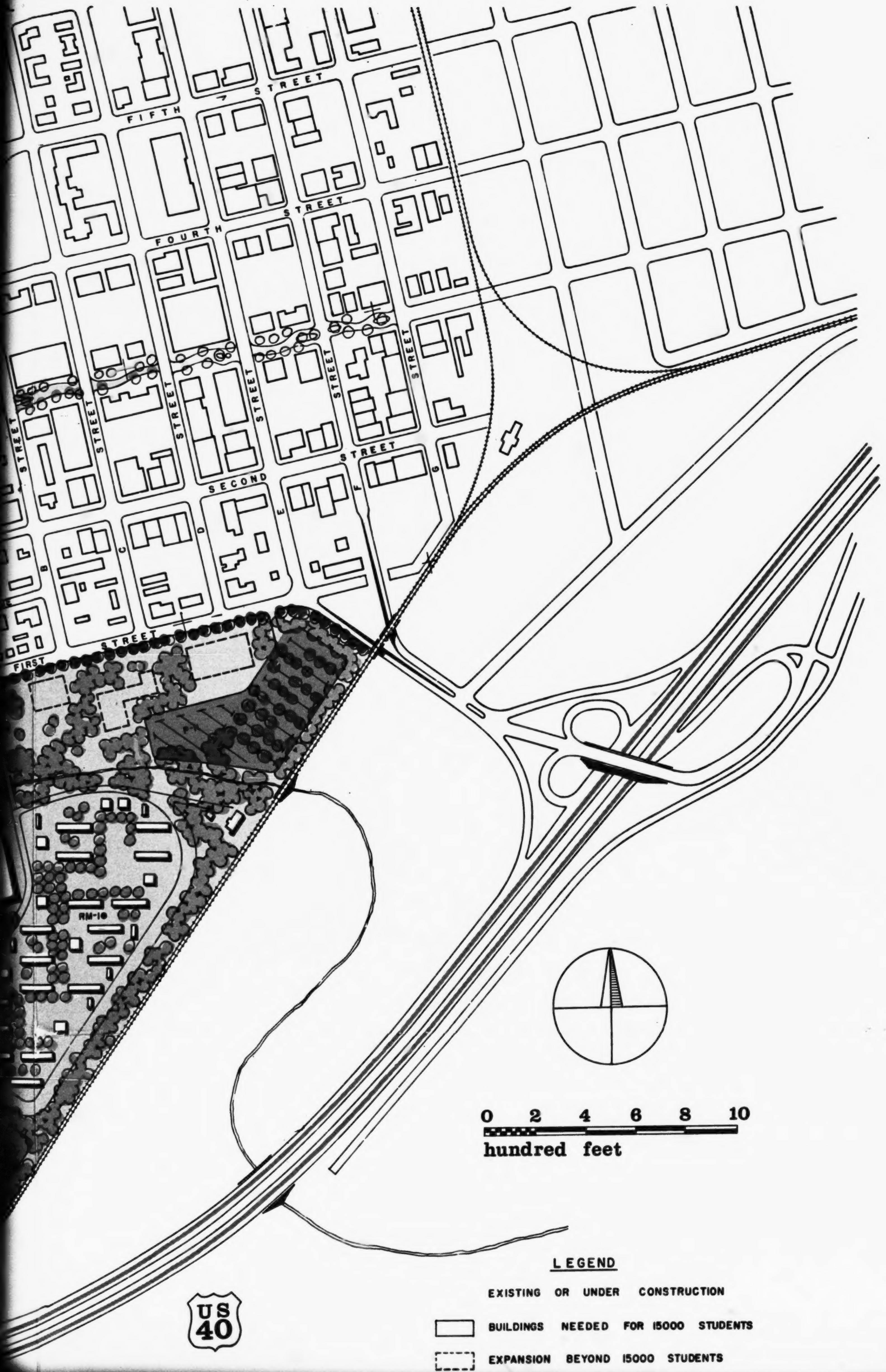
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SECOND STREET
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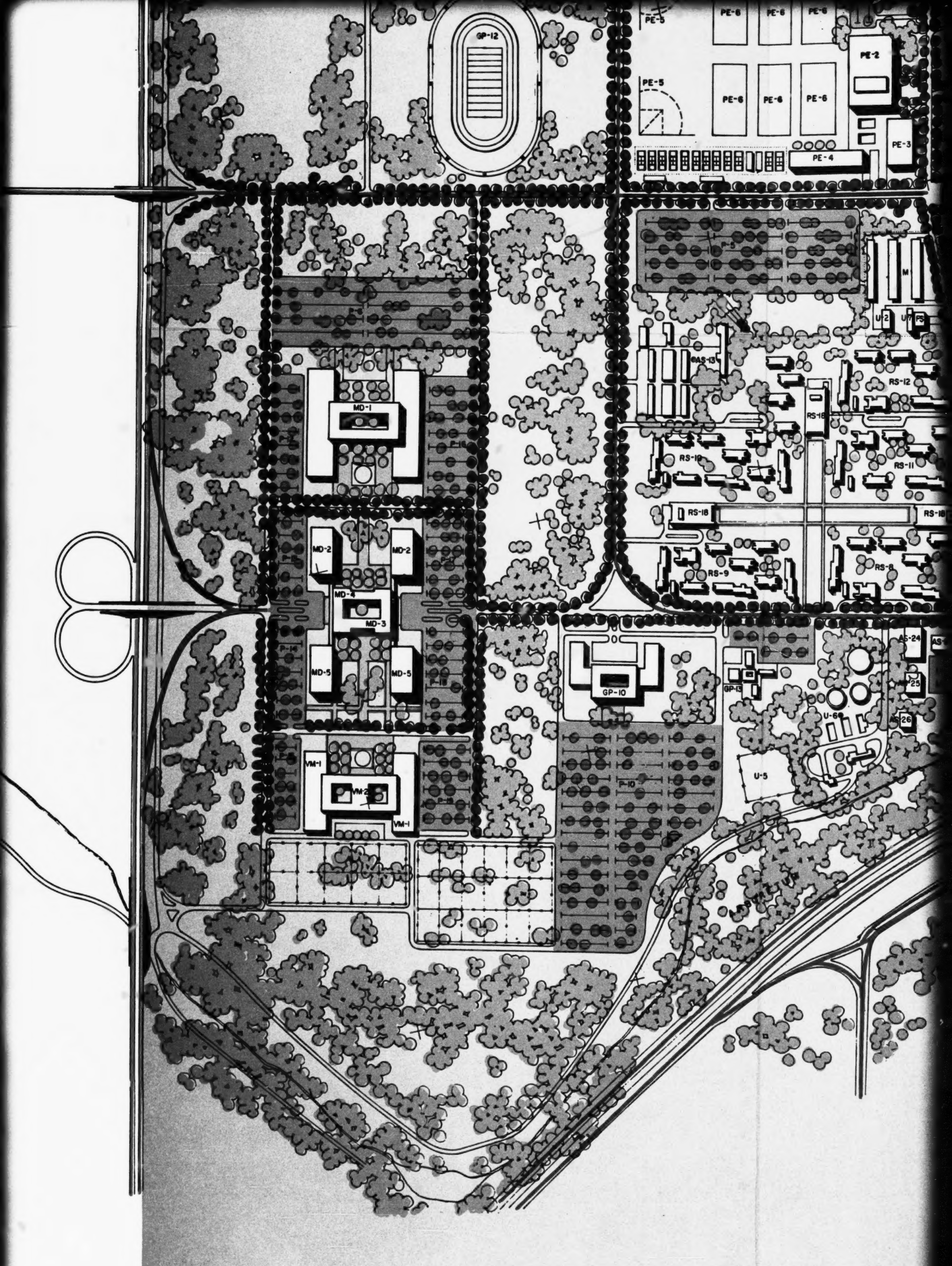
EXISTING OR UNDER CONSTRUCTION
BUILDINGS NEEDED FOR 15000 STUDENTS
EXPANSION BEYOND 15000 STUDENTS
US 40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RS-10
RS-11
RS-18
RS-18
RS-9
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MD-5
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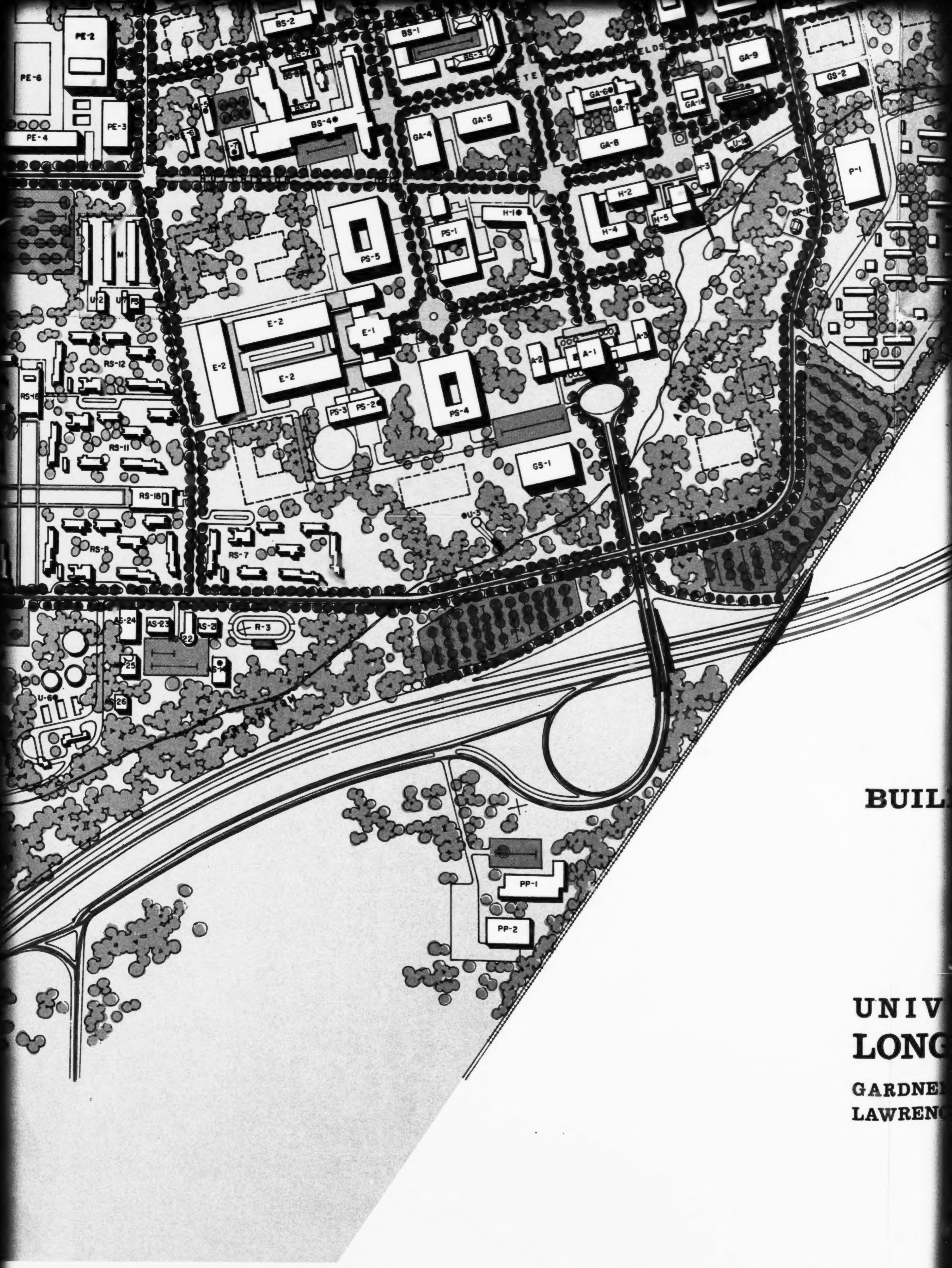
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FIELDS
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HUTCHINSON
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PS-5
E-1
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A-1
A-2
A-3
GS-1
U-5
ARBORETUM
RS-12
RS-18
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RS-8
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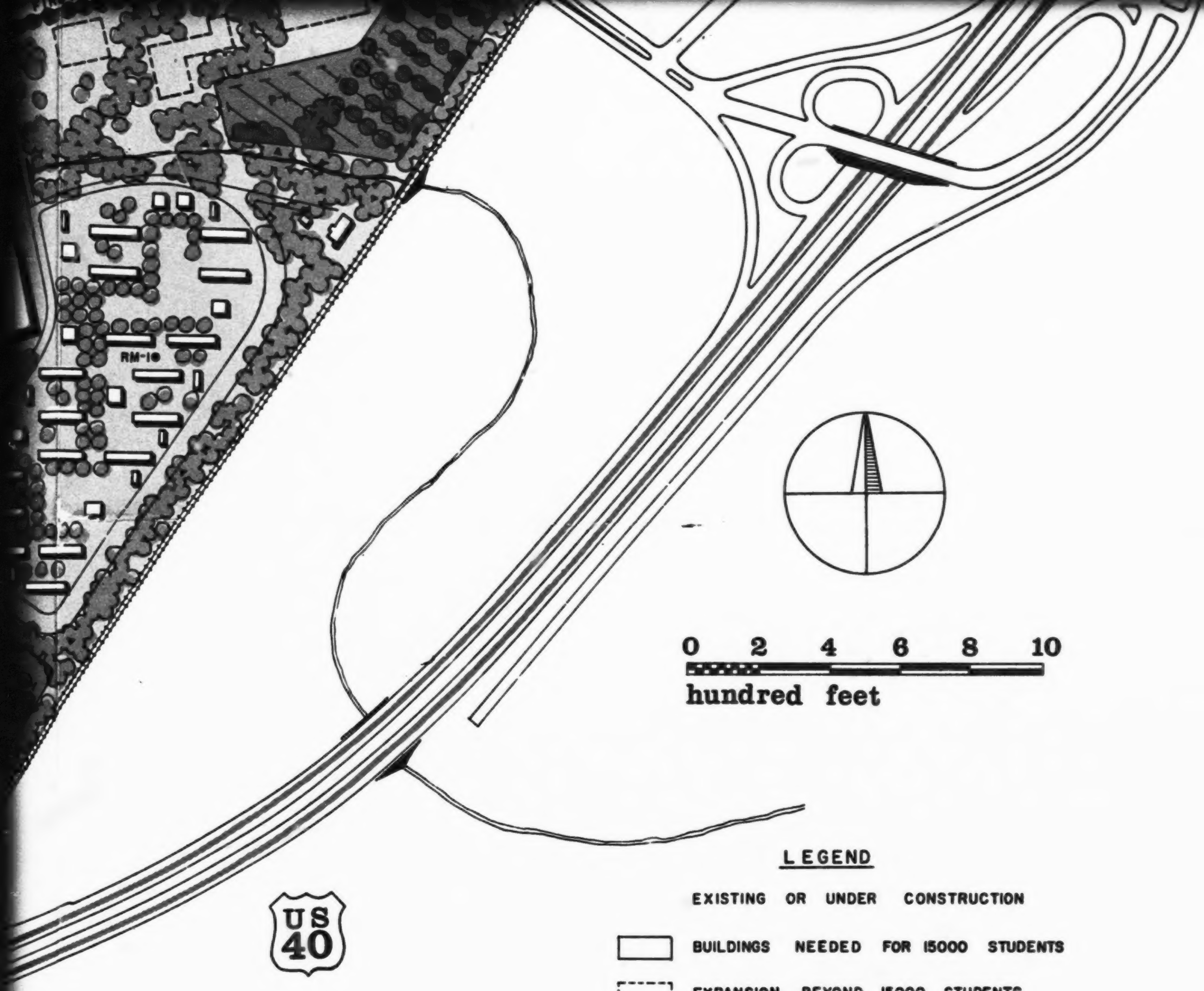

L EGEND

EXISTING OR UNDER CONSTRUCTION

☐ BUILDINGS NEEDED FOR 15000 STUDENTS

⬚ EXPANSION BEYOND 15000 STUDENTS

A	ADMINISTRATION
AS	AGRICULTURAL SCIENCES
BS	BIOLOGICAL SCIENCES
E	ENGINEERING
FS	FIRE STATION
GA	GENERAL ACADEMIC USE
GP	GENERAL PURPOSE
GS	GRADUATE SCHOOLS
H	HUMANITIES
M	MOTOR POOL
MD	MEDICAL CENTER
P	PARKING
PE	PHYSICAL EDUCATION
PP	PHYSICAL PLANT
PS	PHYSICAL SCIENCES
R	RECREATION
RS	RESIDENCE HALLS - SINGLE STUDENTS
RM	RESIDENCES - MARRIED STUDENTS
SS	SOCIAL SCIENCES
U	UTILITIES
VM	VETERINARY MEDICINE

BUILDINGS

UNIVERSITY OF CALIFORNIA · DAVIS
LONG RANGE DEVELOPMENT PLAN

GARDNER A. DAILEY, F.A.I.A. AND ASSOCIATES ARCHITECTS
LAWRENCE HALPRIN & ASSOCIATES LANDSCAPE ARCHITECTS

TABLE NO. 10

COMMITTEE MEMBERSHIPS

1 — CAMPUS PLANNING COMMITTEE

MEMBERS

H. T. Spieth, Chancellor (Chairman)
H. H. Aschmann, Chairman, Educational Policy Committee
H. D. Boen, Superintendent Buildings and Grounds
A. J. Haight, Campus Architect
J. B. Kendrick, Jr., Chairman, Building and Campus Development Committee
E. R. Morgan, Vice-President — Business
G. V. Russell, Consulting Architect
R. P. Shellhorn, Consulting Landscape Architect (Resigned January, 1964)
W. J. Wrigglesworth, Vice-Chancellor — Business & Finance
J. E. Westphall (Campus Architect, 1960-62)

ADVISERS

P. L. Boyd, Member Board of Regents
R. J. Evans, University Architect and Head Statewide Office of Architecture, Engineering, and Planning

TECHNICAL STAFF

A. R. Wagner, University Planner, Office Vice-President — Business
D. J. Weir, Assistant to the Chancellor — Institutional Analysis and Planning

2 — AD HOC COMMITTEE ON LONG RANGE DEVELOPMENT PLAN — RIVERSIDE CAMPUS

MEMBERS

J. B. Kendrick, Jr., Professor of Plant Pathology (Chairman)
H. H. Aschmann, Associate Professor of Geography
H. D. Boen, Superintendent of Buildings and Grounds
A. J. Haight, Campus Architect
M. E. Thompson, Associate Professor of History
D. J. Weir, Assistant to the Chancellor — Institutional Analysis and Planning
J. E. Westphall (Campus Architect, 1960-62)